LOSOPHY, RELIGION & EDUCATION

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OCTOBER, 1954 VOLUME 137 NUMBER 1

AMERICA'S OLDEST MAGAZINE FOR EDUCATORS

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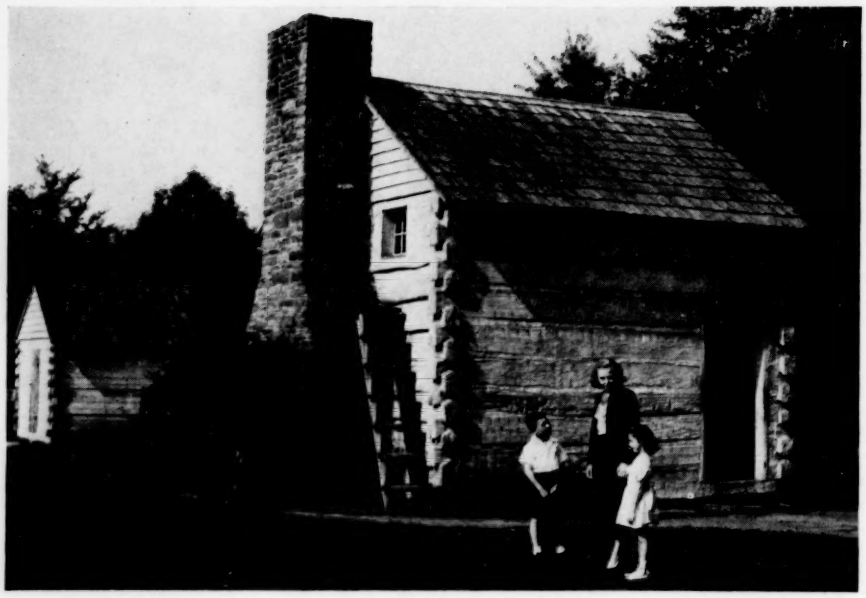

This month our cover illustration and the excellent article on page 31 by Dr. James R. Hobson, Director of Child Placement in the Brookline, Mass. Public Schools, commemorate William Holmes McGuffey and his famous Eclectic Readers.

Born September 23, 1800 in this tiny cabin, McGuffey taught for a time in a log schoolhouse, a replica of which is shown in another picture on page 31. This replica is constructed of logs from the farm where McGuffey was born.

The illustrations were supplied by the Henry Ford Museum and Greenfield Village, Dearborn, Michigan, where both buildings may be visited.

PRE

Philosophy
Religion and
Education

JOURNAL of EDUCATION

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CONTENTS page

Conserving Values in Rural Community Life . . . . . *A. John Holden, Jr.* 2
A Child's Language Mirrors His Needs . . . . . *Ruth G. Strickland* 5
"Belief" . . . . . *Francis J. Hull* 7
Developing Civic Values Through the Social Studies . . . . . *Emlyn D. Jones* and *Chester D. Babcock* 8
Meeting the Reading Needs of the Slow–Learner . . . . . *Sister Mary Justa, O.S.F.* 11
How to Use a Fractional Divisor . . . . . *Foster E. Grossnickle* 17
New Books 20
Research 23
Materials 27
Try it 28
An Appreciation of William Holmes McGuffey . . . . . *James R. Hobson* 31

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As our second year of *Journal* publication begins, we on the staff feel a year older too, in the process of assembling an interesting and informative magazine for our readers. It's been a challenging adventure to get on our feet, familiarize ourselves with the many problems of publication, and to learn the jargon of this strange and fascinating world of magazines.

Although the ***Journal*** is the oldest educational magazine in the country, we wanted to start from scratch, and thus loosened all past traditions to produce a "new" publication with fresh presentation ideas. An interesting framework and a high quality of editorial material are the aims of the staff—we know there is always room for improvement, so any ideas or suggestions that you may care to offer will be accepted as a condiment for food for thought. Please don't hesitate to help us along.

And so the ***Journal*** has one fledgling year behind it, and another one ahead in which we hope to try our new wings for even greater distance in achievement. It's hard work and the going is sometimes chaotic when manuscripts are late and deadlines aren't quite met, but with all these everyday trials, we still have a lot of fun—and progress is the reward for labor.

Conserving Values in Rural Community Life

By A. John Holden, Jr.

To begin with perhaps I ought to make clear that I am not a rural jingoist. I am not what, in slightly more polite language, is called an agricultural fundamentalist. I wasn't raised on a farm, though I did grow up in the country. But our plumbing was indoors. I didn't walk three miles to school, but I did walk one mile, and walking back in the wintertime into the teeth of a west wind we used to have to walk backwards some of the time even to be able to breathe at all. I used to like the Country Boy's Creed which began, "I believe that the country, which God made, is better than the city, which man made." I still do like it but I would not subscribe to any philosophy which held that all that is good in our culture has come from the rural setting and all that is bad comes from the cities.

Perhaps I can put it this way. Sometimes I think that people are divided into two kinds: those who look upon a region as consisting of several cities with a lot of empty space, called country, in between; and those who look upon the same expanse as an area of countryside with its hills, its streams, its forest, lakes and fields, with a few blots on the landscape called cities. Or, to put it another way, there are people for whom the city is the only long-run home. They like to go to the country for vacations and visits but the city is where their interests are and where they feel they belong. On the other hand there are people who feel at home in the country. Though they make trips, even extended visits, to the city for education, for stimulation, for business, or for fun, it is only when they are headed for the country that they feel they are going home. I am of the latter sort, and I assume that most of you are also of that sort. Because we feel that way and because we know that the culture of our country has historically such strong roots in rural life, we want to see that whatever is good that has been nourished by these roots is carried forward and made to live and grow in our changing future. We know that country life has changed dramatically during the past generation, that with the telephone, electricity, good roads, and the automobile many of the distinctions between country living and city living have faded away.

Partly because of the shifts I have mentioned, this topic I am writing about is a shifty one. What is rural? And what is a community? I can't say that I am enough of a scholar to know the currently accepted definition of either of these two terms. I have gathered the impression though that neither of them is clear-cut. And as far as I can see, for the purposes of our discussion there is no great need that they should be clear-cut.

I propose to discuss a few of the values for survival of civilized society. With the world in a continual crisis I don't see why we should fritter away our time by toying with anything less significant. And I don't mean that these values are necessarily unique to rural community life; I mean simply that rural communities can be very good places for fostering them. Nor do I mean that these values are pure and unadulterated. Look at the value we might call neighborliness. That can easily become perverted and turn into restriction on the freedom of one's neighbors by setting up rigid patterns of behavior. So with many others; they can be pushed off balance and turned into liabilities.

Sensitivity to Other People

The values we want to conserve are those that favor the growth of responsible, sensitive, balanced, creative human beings. I do not pretend to make a complete canvass, but merely to suggest a few that seem to me to be among the outstanding. Let us start with two which have to do with the relation of people to one another. I am going to call one of them *sensitivity to human beings*. In general, the larger the crowd, the less one cares about the other people in it. Working with children or grownups in masses tends to make one insensitive to their personal reactions as individual human beings. Sometimes this is necessary purely for self-preservation, but surely we would not contend that it is desirable. We are all familiar with the awareness of people as individuals that goes with country living. Each one's idiosyncrasies are well-

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In 1929 and 1930 he traveled in Europe on the Sheldon Traveling Fellowship from Harvard in quest of constructive rural school philosophy and good practice. Dr. Holden spends his leisure time skiing, square dancing and enjoying choral music.

known to all, and usually allowed for. A happy illustration of this point is the relative absence of age stratification. Old and young do more things together both in family and in community. I suppose that even some of you people were taken to Grange and Town Meetings as babies. Children often call their elders by their first names with no disrespect, and most adults show a real regard for children as individuals. On the dark side is the kind of cantankerousness that rustics seem to be able to display more strongly than urbanites. There is, of course, such a thing as too much isolation, psychological or geographical. But we cannot judge this value by its perversions. And I take the position that this is generally an asset of the rural scene. It is one of the chief roots of that important aspect of democracy, respect for the individual.

Faith in Group Effort

The other of these social values to be mentioned here is what I would call *faith in group effort*. We are in a period when frustration and futility all too often seem to reward those who try to improve man's lot. Cynicism has been breeding for a long time in many places. Yet, there never has been a period where there was more need of concerted action for the common good. Do you remember the husking bees, the barn raisings, and the quilting parties of the olden days? They were concerted group action for the common good. Now please don't jump to the conclusion that I think that getting fair prices for the farmer, legal protection for the consumer, relief for the taxpayer, and peace for everyone would be a quilting party or even a barn raising. Our fathers devised a form of government which was dedicated to a proposition which no one ever before has tried to use as the cornerstone of a governmental system. It never has worked perfectly. With the stupendous upsurge during the last generation of complicated and difficult problems on the national and international level, it is hardly surprising that feelings of frustration and futility should grow in many people and leave them cynical about the part they can play in the affairs of government.

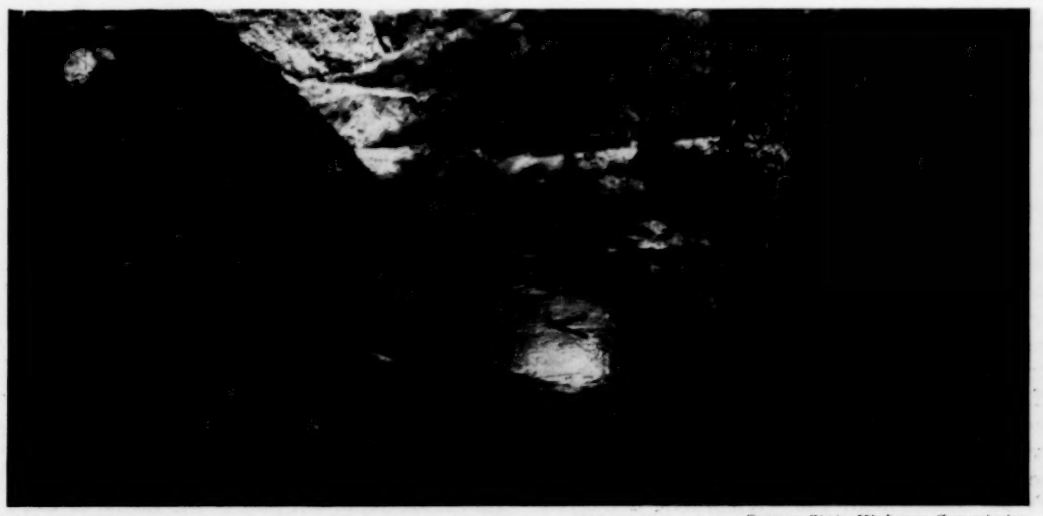
But when the members of a Grange build their own new Grange Hall, when responsible committees of citizens study out and put through a plan of school district reorganization or a program for a new school building, they minimize or eliminate cynicism through their very acts. What's more, they are learning important things about civic action which, when extended, and applied in broader fields, may help them, and us, to understand how to run this complicated giant machine which is our government.

These two values which I have just called sensitivity to other people and faith in group effort might be called extrovertive values. They need to be held in balance by something on the introvertive side. There is a powerful trend in many aspects of our national life today to force us into mass thinking, mass communication, mass living. Even in our educational programs we have too generally shifted our sights from man thinking to man getting along with others.

Solitude

We are apt to lose sight of the fact that the testimony of eminent scientists and philosophers is that creative thinking has its origin in some disturbance, dissatisfaction or feeling of inadequacy. The good of our institutions as well as the good of our people as individuals demands that we avoid unbalanced emphasis on social conformity. One of man's deepest needs is the need for belonging, but at least as deep is the need for self-hood, for *being an individual in one's own right*, and one of the channels giving clearest access to this attainment is solitude.

Perhaps solitude is no more available in the country than it is in the city. I have heard people say that they have felt the pangs of loneliness more keenly in the city than in the country (of course that is not



Oregon State Highway Commission

Solitude — a value in rural life.

quite the same thing). However that may be, I will set down *solitude* as a value in rural life, if not in rural community life. The chance to stop the car and eat lunch by a babbling brook or at an outlook point where many miles of countryside spread before you is an opportunity not given so regularly to city people, and one which we of the country have reason to cherish.

Opportunity for Concreteness

This next value I want to mention will be called the *opportunity for concreteness.* Our pioneer forefathers took the world as they found it and made it over to yield them a good living. They weren't bothered by theories or abstractions. Country people quite generally seem to have a practical, concrete approach to anything they do. They are "down to earth." Generations of coping with nature in the raw have made them that way.

I'll never forget a very enlightening experience I had a few years ago when I was deepening my well. Since the water level was very low, the idea was to dig the well deeper and extend the intake pipe, holding the newly excavated portion in shape by putting down a wide tile pipe as lining. When I had dug down nearly as far as I wanted to go I struck ledge on one side of the hole. In one way that was fine because there was a nice stream of water gushing from it, but it did block the setting of the tile. I thought it would be possible to chip away enough of the ledge to let the tile down to the desired level, and I managed to borrow stone-cutting tools from various neighbors. On the crucial day, I went down into the well to chip away at the ledge while neighbors manned a bucket and rope to keep the water level low enough so I could work. After watching my futile efforts for a short while, one of my neighbors had a suggestion. He was a man who had never gone beyond the fourth grade in school. On his marginal farm he had had to make do in the simplest of ways. He was watching me, holder of an engineering degree, grappling with what was essentially an engineering problem. He said, "I was just wonderin', wouldn't it be easier to chip a piece out of the tile than to cut down that ledge?" This practical approach won out. I scrambled up out of the well, cut a bit out of the lower edge of the tile, we lowered it into the hole, and it fitted perfectly.

Often the practical outlook seems to stay so close to the ground as to produce the resistance to new ideas for which country people, especially Vermonters, are notorious. But I would contend that this resistance to new ideas, so-called, is chiefly the resistance to ideas not expressed in terms of their own experience. A writer, summering in Vermont, as many do, found himself in need of a dictionary. He first asked the local storekeeper if he had one for sale. On receiving a negative answer, he asked if he could borrow one, but the storekeeper said he didn't have any to loan. "What's the matter with you Vermonters, don't you even use the dictionary?" exclaimed the writer. "In Vermont, we don't use a word if we don't know what it means," drawled the storekeeper.

I strongly believe that one of the essential paths to world understanding lies through common sensitivity to the readily observed great cosmic forces of nature, such as the rhythm of day and night, of the seasons, of youth, and of maturity in all living things. Those of us who have ready access to these forces are in possession of a common bond among rural people all over the face of the earth.

Conditions That Promote Humility

This same closeness to nature and life should help us to develop another important value, *humility.* In the face of nature, man is constantly reminded of his own frail human limitations. This is done not only by the raging storm and the inexorable cycle of the seasons, but even more by the radiant sunlight, the babbling brook, and the still small voice—or am I an old fogy? Has all this humility stuff been thrown into the discard by weather control, electronics, and lighted hen houses, to say nothing of atomic energy?

It looks as if there is still a crying need for humility. And the country dweller has easier access to the conditions which encourage it. As Professor Hocking of Harvard has said, "Philosophy and religion share in the function of tapping the vein of seriousness with which the responsible man wishes to face his more difficult passes of experience. The most dangerous feature of contemporary life is not in its transition but the fact that in the course of change our capacity for serious thought has so far diminished. The underlying sadness and hollowness of much modern life is due not to poverty nor to too great labor but to an absence of depth, a fear lest meditation should show the emptiness of the affair we call life. Philosophy is the business of taking stock, at least once; it is the passage to manhood. It should be especially the right of the man who, standing near the earth, knows it both in its threat and its promise, sees it both as the receiver of death and the producer of life, knows by direct handling how closely the tangible living body is welded to the intangible and infinite mystery of consciousness and of the soul."

Conserving These Values

I have sketched five values which seem to me to be available in rural community life and endeavored to give some indication of their significance: sensitivity to other people, faith in group effort, solitude, the opportunity for concreteness, and the conditions that promote humility. Remember, I have not claimed that these values are necessarily peculiar to the rural environment nor do I contend that they are always obvious on the surface there. But I do believe that in the rural community conditions prevail which favor their appearance. What about conserving them? That is an important part of the theme of this article.

(Continued on page 16)

A Child's Language Mirrors His Needs

By Ruth G. Strickland

The way an elementary school child uses language tells the teacher a great deal about him—his cultural background, his fund of experiences, and his personal needs. Teachers observe children and listen to them in order to know how to teach them and what they need to learn.

A child's language and his personality development are closely interrelated. A number of writers in the field of human development have called attention to some aspects of personal and social development which determine in large measure the ease with which a child learns at school and the success he can achieve in learning to speak and listen, to write and read.

Faith in Themselves and Others

The majority of children learn early, probably in their very first year, to trust the people who take care of them. Along with faith in others, they gradually develop faith in themselves — faith that they can accomplish what is expected of them, and can do with their bodies and minds what they want and try to do. The child who comes to school, at any age level, with faith in himself and others is ready for new experiences and can lay hold on them without fear or crippling inhibitions. The child who lacks such faith, who does not find it easy to trust others or who is fearful of his own powers will find it difficult to express himself freely either verbally or in writing and may be unable to give complete attention to what the teacher is trying to teach. A young child in the kindergarten or primary grades may be able, with patient guidance, to develop sufficient faith in his teacher and through her in the children, to be himself more fully at school than at home. An older child with unfortunate school as well as home experience behind him may find it much more difficult to break through old patterns of response and learn to think of his world as a trustworthy place. The child who is defensive or aggressively uncooperative is usually a child who has been unable to develop this basic sense of trust.

Becoming a Self-Determining Person

Another developmental need is for becoming a self-determining creature, a person who makes decisions and orders his own coming and going. The two- or three-year-old usually develops a sense of being a person in his own right, but some children of school age have never learned to think for themselves or to have purposes of their own and follow through with them. They lack a sense of personal worth and dignity. If the teacher and their school experience can help them to develop self-respect and a sense of adequacy, their growth in language skills and all other work improves rapidly.

A child who has developed confidence and a realization of his own powers goes on from there to develop the ability to initiate and carry through all sorts of enterprises. He wants to try himself out in many ways and enter into all the types of activity he sees going on about him. Imagination is active and interests are many and varied. The confidence and sense of power he has developed enable him to reach out eagerly for new experiences. Under wise home guidance he becomes intellectually curious, open-minded, willing to try new things, and able to see new solutions to problems. Through such guidance

Dr. Strickland, a Professor of Education, Indiana University, is active in the National Council of Teachers of English and is at the present helping to write the forthcoming volume *Language Arts for Today's Children*.

She has taught at Temple University, and Kansas State Teachers College, where she was Director of Elementary Education. In addition to other books, Dr. Strickland is the author of *English Is Our Language*; she has also contributed articles to several educational journals.

he develops a positive conscience and assurance that within limits he can trust his impulses and follow them. Under less wise guidance, curiosity and initiative can be deadened and the child comes to distrust or even to fear his own impulses.

If a child comes to the elementary school without the initiative and inner controls he needs, the problem of teaching him is greatly increased. Reawakening curiosity and initiative after they have been severely thwarted presents a real challenge to any teacher. Developing concern for what is right or wrong, whether it involves spelling, legible handwriting, accurate reporting, or intelligent interpretation of what is read, is difficult if the child has little basic concern for right and wrong or is overburdened with fear that what he does will be imperfect.

School age children stand in special need of opportunity to feel a sense of accomplishment. They want to learn to do many things they see adults doing and to learn to do them well. If what is expected of them fits their level of development and makes sense to them they will work hard to achieve. A child who appears lazy and disinterested is almost certain to be a child who has met with little challenge or a child who has tried and failed too often.

What does all this mean for the teacher who is concerned with the language arts and with helping children learn to communicate as easily and effectively as possible? It means that the child who has had favorable opportunities and experiences and has developed these elements of personality is ready and eager to express himself and to utilize language as a means to many important ends. The child whose development has progressed less favorably will need help to develop in many or all of these ways if he is to grow in language power.

Developing Language Skills

Interest in people and their actions provides the basic motivation for developing language skills. No little child would learn to talk if there were not people to talk to and some personal value in talking. Interest and personal need form the starting point for growth and learning. Oral language develops rapidly when children have people to talk to whom they care about and with whom they are comfortable and when they have real interests to talk about. For children who are reluctant to talk, contact may have to be made individually through visiting with the child about his interests while he helps the teacher with chores about the room in preparation for the day's work, visiting on the way to and from the playground, or an informal conference after school. Genuine interest on the part of an adult who is significant in the life of the child adds greatly to the child's sense of his own worth and helps to release his energies for constructive self-improvement. Encouragement, guidance, and opportunities for enriching experience help to build vocabulary and develop greater maturity of expression.

Listening comes easier, too, to the child whose basic personality needs are being met. He can more readily lose himself in the listening and reach out to meet the ideas of others. Also, when necessary, he can more easily discipline himself to attend even though he is not keenly interested in what he is hearing.

Expression through writing is especially difficult for a child who lacks facility in oral language. He may need for a long time to have opportunity to talk through what he wants to write so that he can hold the ideas in mind while he labors to get them down on the page. His first drafts may be poor, but once

(Continued on page 10)

Courtesy of University of Wisconsin

Listening comes easier to the child whose personality needs are being met.

"Belief"

By Francis J. Hull

(A sixteen year old boy's expression of his mother as a teacher.)

About eight o'clock it was, and a block or so from my home, when this peculiar thing happened. Odd, too, it should have occurred on that evening. The day had been one of those happy, uncomplicated days—except for an unexplained restlessness that comes to a fellow on the first bright spring days. Then, it happened. That evening a part of me grew up so rapidly, that I'll never, never be just fifteen again.

To understand the incident, you'd have to know a little of the background. You know about ministers' children, and how they're supposed to react at times. Well, I'm a teacher's son, and I guess I've done a bit of reacting in my time. Don't get me wrong. My brother and I are proud of Mother. We think she's tops, but sometimes we've felt she was hipped on this teaching angle. You see, she is the kind who brings her pupils home with her in her mind and heart. So we've lived with a great number of Jims and Marys through the years.

Sometimes the dinners are scorched while Mother figures out a new angle for a difficult child. Often we've let drop a discussion on the Dodgers and the Giants when we knew, by her expression, that her day hadn't measured up to her hopes. On another day we'd find her so radiant, we'd feel sure she'd come into an inheritance, only to hear her say, "It has been a mountain-top day! Freddie began to read!"

Usually one pupil begins, each year, to live with us more than the others. We knew, about November, when she said dreamily, "There's a boy named John," that John would be our house guest for the year. He was. He appeared at our table, seemed to occupy my favorite chair, and spent, I suspect, many a night. We sympathized with John, but at times felt that what he needed was a spanking instead of Mother's consistent love, and understanding. Once I said, "I've never seen this John except through your words. Is he worth all you're giving him? Why don't you let up?"

She said, "I believe in him, have faith in his future. When you believe in a boy, he doesn't stand still. In time, he'll measure up to a part of my believing. And I can't stop, ever, believing. John's the hardest yet, but I'll believe him into straightening out."

Well, now you may understand better what happened this certain evening I mentioned earlier. I don't, all the way, but I hope to, some day. I had asked permission to go out with a crowd in one of the fellow's cars. Mother's no prude, but she has ideas about people, and she put it up to me, that she'd rather I'd skip this particular event. I guess I knew she was right, but sometimes when you're fifteen you feel you have to prove some things about yourself. So I left, feeling wrong yet determined to follow through.

I stood at the corner, waiting. As I told you, it had been a rare spring day, and this night was even more special. The stars were not too bright, nor the street lights too close, but I could feel the day—the yellowness of the forsythia as it stood across the street in evening shadows. I felt a quiver of exhilaration about spring, about being fifteen—and then—What do you know? Standing by me in the shadows was John! John as he had been described—defiant, untrusting, inarticulate, John with sandy forelock across his eyes too old for eight, too young to hold such hurt.

I looked at him, and it didn't seem strange, or supernatural, or wacky. I looked at my mother's pupil and he looked at his teacher's son. The night stood still, but the stars seemed to beat against my head with a fierce brightness. And I heard her voice,

"I believe. And can't stop, ever, believing."

Something stirred my feet to movement and I was heading home. What was happening? Suddenly I knew—I knew. And a part of me grew up to meet that knowing. That belief, that blessed, crazy, amazing belief of Mother's that had pulled the Joes and Ellens and Sammys into the harbor of her heart was pulling me out of the mock grandeur of adolescence.

As I neared home, I turned and thought I saw John, small and still, a part of night's odd loneliness. Or was he an illusion of shadows? At any rate, I lifted my hand in a salute of affection and slight chagrin. You, John, you and all the Johns who shall sit in Mother's classroom through the years—you'll do all right. I, too, will be all right. A naive, yet quite splendid belief shall be with us.

Although Francis Hull is now only seventeen years old, he has won several essay and poetry awards and his poetry has appeared in anthologies of the National Poetry Association, and the American Poetry Society. After his graduation from Newport News, Virginia, High School in 1953, he entered Cornell University where he has completed his freshman year. He is especially interested in ornithology and biology.

Developing Civic Values Through the Social Studies

By Emlyn D. Jones and Chester D. Babcock

There is probably agreement, in general terms at least, between professional educators and citizens at large concerning the civic values that we want young people to develop. Although we rely on different terms to express our aims we can generally agree on these points:

1. We want young people to come out of our free, public schools with a keen appreciation of their political heritage—an appreciation of the institutions of democratic government and the arrangements whereby through our duly elected representatives we can make our will known.

2. We seek to help children and youth develop an awareness of their responsibilities in home, school, community and nation, and to recognize the interdependence characterizing our social organization with reference to both structure and functions.

3. We attempt to instill in our students an appreciation of our natural resources—the material gifts of nature that have enabled us under our economic system to build a great and powerful nation with the highest standard of living for the greatest number of people in the world's history.

4. We strive to help our students develop an appreciation of our economic system—our achievements under the system of individual initiative and competitive enterprise and a deep concern about the threats to that way of life.

These goals—these civic values—are concerned to a large extent with *feelings* and with *attitudes*. They represent emotional responses to situations. They are the basis upon which, in the final analysis, many personal courses of action are determined. For example, John Jones, plumber, and Jim Smith, banker, go to the polls and vote on election day because they have feelings of personal concern about the administration of the government and the solution of civic problems. The wisdom with which they use their votes will be determined by their understanding of the issues involved, and the values which they use as bases for judgments.

Most of us react to problem situations within the limitations of a cultural climate. We may accept or reject the general reaction pattern within that climate of opinion but—accepting or rejecting it—we respond to it and the kind of response depends upon the *values* held by the individual.

All curriculum areas in the school—language arts, sciences, mathematics, even the fine arts—have a responsibility for developing in young people the understandings and skills essential to civic competency. All must help in building the foundations of good citizenship, but the major responsibility falls upon the social studies.

Three-Fold Responsibility

The responsibility of the social studies in the area of citizenship is in a sense three-fold: They must develop understandings—they must help students learn the necessary facts. They must also help students acquire the requisite skills to problem-solving, communication, and social action. And finally, on the basis of these, they must strive to develop the basic attitudes and value patterns.

Students gather the necessary facts from such social studies areas as history, geography, civics, economics, and a study of current affairs. These facts are learned in a variety of ways. They are probably best learned by use in problem-solving situations where they are used as tools in critical thinking. Not all knowledge, of course, is achieved in this way. Much of the program in the elementary schools must be geared to the child's natural interest in his environment. This interest in exploring his environment can be used effectively in the schools in helping the child

Dr. Jones is Director of Social Studies in the Seattle Public Schools. He has been an elementary and junior high school teacher, a Naval officer for four years and a department head. He is the co-author of several books and has written numerous articles for educational journals.

Dr. Jones is especially interested in improving the teaching of social studies in elementary and secondary schools. An outdoor enthusiast, his special interests are hunting, fishing and camping.

Before becoming Executive Director of Curriculum in 1948, Dr. Babcock had been Social Studies Department Head, Director and Curriculum Consultant in the Seattle Public Schools. His hobbies include home improvement, archery, fishing and learning to play the organ. This past year Dr. Babcock has been moderator of a student TV panel called "Face the Facts."

Courtesy of Edison Technical School, Seattle, Washington

Grade five pupils at Seward School, Seattle, work with pioneer crafts as they develop a better understanding of their heritage?

achieve the understanding and knowledge which will make him aware of the cultural climate and the problems which exist in the social order.

It is the function of history to extend the experience of the student and help him see the present from a long range perspective. From history he gets an insight into the direction in which society is moving and is helped to form judgments on current trends in the light of the achievements and mistakes of the past.

The study of geography gives him knowledge of the framework within which mankind operates. He sees the resources with which man works and the environmental factors that shape the political and social organization. Without a knowledge of geography he could never understand the historic drive of the Russians toward a warm-water port and the westward shift in the center of gravity of the world's trade from the Fertile Crescent, to Italy, to Spain, to England and now to America. Without this understanding he would fail to realize how the civic values he holds have developed.

From a study of current affairs he sees that our way of living is affected by events abroad. To his responsibilities to the community, state, and nation are added responsibilities to world neighbors. Democracy at home is affected by the amount of democracy in the world without. Grave threats to our democratic way of life are raised if an aggressive totalitarianism becomes widespread elsewhere.

Classroom Experiences

But let us go out and observe some youngsters at work in the classroom. Suppose we stop here at West Seattle High School and visit a U. S. History class. A local election is approaching. On the bulletin board we see news stories and pictures of the candidates. Here is a group of students making an analysis of a questionnaire that has been sent out to candidates. These students, after class study and discussion, have drawn up a list of what they consider to be the important qualifications for public office. Candidates have been asked to supply information about themselves, their business experience, their educational background, and their point of view on important community issues. Over there is another group. These students are gathering information on two important referendum issues upon which voters are being asked to cast their ballot, getting experience in recognizing biased materials. They are making an analysis of the persuasive techniques used. A third group of young people is preparing a map showing the location of polling places within the community. This is one step in the campaign being planned to get out the vote on election day and encourage more general participation in local elections. This group is working actively with other civic organizations as a functioning part of the community life. Here, in all these activities, emphasis is being placed upon the development of sound civic values. Of course facts are being learned and skills are being acquired. Through their work these young people are developing an appreciation of their political heritage and the rights and responsibilities that are theirs as American citizens. Sound values consistent with our democratic philosophy are being developed.

Now let us go across town to an elementary school and join a group of youngsters—these are sixth graders—on their way to the local Bethlehem Steel plant. When they arrive at the gate they are met by plant officials who explain to them how the scrap steel is collected from the surrounding area and brought in for processing. The children see the giant cranes moving great loads of scrap toward the furnaces, and move on to observe the scrap being fed into the yawning mouths of the open hearth furnaces. They see the

production of structural steel for use in the new traffic viaduct and the towering office buildings of the city. They come to recognize the interdependence of all industries. As the children proceed through the plant they see the organization of a modern industry and get a better understanding of the highly complex division of labor. They see the importance of machines and the nature of large scale production. Out of this experience comes a new recognition of the importance of our natural resources in the life of a growing community. Their civic pride and their civic understanding are increased.

Shall we stop next at a junior high school and visit a class in Washington resources and industries? Two students are at the blackboard. The class has just finished seeing a moving picture showing the logging industry in their region. They have seen the methods of the modern lumbering industry, noting the techniques used to remove the mature trees, leaving blocks of seed trees to assure a timber crop for the future. At the blackboard, the students are listing for discussion the wood products of importance in our own community, region, and nation. They discuss the effects of improper removal of timber from the hillsides on the streams, and the relationship between sound lumbering methods and the problems of soil conservation. Days of study will follow this introductory activity. They will realize the importance of using these resources wisely in order to maintain a high standard of living now and to guarantee adequate resources for future generations. These students will come to recognize that in effect our natural resources are held in trust by each generation to be used wisely and well.

But civic values are not something to be developed now for use at some future date. We know, for instance, that the good adult citizen does not suddenly become a good citizen at age twenty-one when he casts his first ballot. In all likelihood he was a good citizen as an adolescent.

Let us pause next at the Roosevelt School. We see the judicial department of the student government in action. Here a court, composed of students elected by their peers, is hearing the case of Jane Doe who has been given a traffic ticket by a student hall patrolman. The court listens to the charge and hears Jane's story. The reasons for orderly hall traffic are explained to Jane, and the court makes certain that she understands the reasons for the rules and their importance in building safety. If Jane should apear in court again for the same offense, her case would be referred to the principal for disciplinary action. Here students are developing an awareness of their responsibilities and recognize that the welfare of the group is a protection of the rights of the individual.

Civic values grow out of experience. The facts of history and geography have new significance as students use them as the base upon which to build a better understanding of today's world and its problems. If sound civic values are to be developed, the relation between the gathering and learning of information and the use of that material must always be clear. There must be practice in good citizenship at all levels and throughout the school life.

A Child's Language Mirrors His Needs

(Continued from page 6)

he has captured the thoughts and recorded them, he is ready for help to refine what he has written and put it into acceptable shape. The fact that his ideas are respected helps him to accept any necessary guidance in handwriting, spelling, and matters of form.

Wholesome personality development makes the task of learning to read easier and more fruitful. It stands to reason that the child who has faith in himself can put more effort and concentration into the systematic daily work that is necessary to develop skill in reading and to adapt reading to the many needs and purposes of classroom work.

Through building up the child himself, we increase his power to learn and to achieve. The elementary school years are important years for building the self. The child is the builder but he can build only with the materials of his own experience. If his experience is constructive and helpful he can build well. If it is destructive to his growing sense of self he will be unable to develop a wholesome personality. Often the help a child needs in personality building takes relatively little of a teacher's time, but it does take thought and real concern for the needs of the individual. The child's behavior and his use of language reveals his needs to the teacher who observes and listens. The satisfaction of watching a personality expand and grow in power and wholesomeness is one of the greatest satisfactions a teacher can experience.

Some helpful books:

Dollard, John and Miller, Neal E., *Personality and Psychotherapy*, New York: McGraw-Hill Company, Inc. 1950.

Havinghurst, Robert J., *Human Development and Education*, New York: Longman's, Greenard Co., 1953.

Jersild, Arthur T., *In Search of Self*, New York: Bureau of Publications, Teachers College, Columbia University, 1952.

Witmer, Helen L. and Kotinsky, Ruth, *Personality in the Making*, New York: Harper and Brothers, 1952.

Meeting the Reading Needs of the Slow-Learner

By Sister Mary Justa, O.S.F.

Needs of the Slow-Learner

All children need effective instruction in reading. Children whose learning rate is low because of their retarded mental growth need excellent instruction if they are to develop into contented and useful citizens. They need an understanding teacher who has insight into their handicap. With love and patience she will attempt to develop a level of reading ability that will enable these individuals to take their places in society and contribute their share to its welfare.

Slow-learning children, like normal children, sense the need for reading both in their school life and in their outside experiences. Indicative of this is the use of the oft-repeated question, "What does it say?", among children whose interest and comprehension levels are above their achievement in the mechanics of reading. Reading for pleasure as well as for information and protection will play an important part in the life of the slow-learning child as well as the average child.

Reading is not an end in itself. Rather, it is a means of attaining higher goals. It influences a child's thinking, his emotions, and his behavior. He imbibes ideas and ideals as they are presented on the printed page and incorporates them into his personality. The aim of the true educator is to use reading as an aid in the development of better individuals, loyal and useful citizens, and a more truly Christian society. What reading is doing to the child rather than what the child is doing to reading should be given consideration.

Ability to read makes the exceptional child less different from the normal child and more acceptable in a group. He derives a sense of accomplishment and security as reading aids him in protecting himself, in acquiring information, and in securing enjoyment in his school life and everyday living.

Reading Capacity of the Slow-Learner

Experience proves that the majority of educable mentally-retarded children, if given efficient and systematic instruction in a pleasant and secure environment, are able to attain a reading grade level commensurate with their mental age. On standardized achievement tests a significant number of these children attain an educational score even higher than their mental age predicts. Hence, it is the responsibility of the teacher, whether in a normal classroom or in a special class, to help the slow-learning child to achieve mastery of this tool as far as his capacities permit.

Most children with an I.Q. of 50 to 60 can learn to read on a first or second grade level by the age of fourteen or fifteen. Those from 60 to 70 can learn to read materials of third or fourth grade level. Those from 70 to 80 may be expected to reach fifth or sixth grade ability.

Since reading is a mental process involving a series of complex skills, it is acquired with difficulty by the retarded child. He can learn what normal children of the same mental age can learn, but at a slower rate, until he achieves his maximum capacity.

Basic Principles for Teaching the Slow-Learner

An understanding of the learning characteristics of the slow-learner is necessary for success in teaching him. Some of them are as follows:

1) *His mental age is significantly lower than his chronological age when he begins school. His speech, language, experiences, and concepts are too meager to begin reading at an early age.* A good and prolonged readiness program planned to meet the needs of the children in the group will facilitate the maturation necesary for success in reading.

2) *He has extreme difficulty in dealing with abstractions.* Make the learning situations as concrete as possible. Utilize the child's own background and experience in his reading matter.

3) *His learning rate is slow.* Introduce new material gradually and provide for a great amount of *meaningful* repetition. Prolong the reading stage at each level to correspond to the slow rate of progress. Stress accuracy rather than speed.

Since his learning rate is slow, the amount he can be taught before he leaves school is limited. He must be taught definitely what he needs in order to take his place in society. He needs ability to read signs, directions, directories, his letters, how to find information in newspapers, time tables, and similar items.

For the past eight years Sister Mary Justa, a member of the community of St. Francis of Assisi, Milwaukee, Wisconsin, has taught in St. Coletta School in Jefferson, Wisconsin, a school for the mentally retarded. Before going into special education she taught elementary school children.

4) *He has poor deductive powers of reasoning and is deficient in making associations and inferences.* Consequently, there is a limited transfer from the learning to its application, or from the learning of one fact to the learning of another. Give him specific help in interpreting his reading matter. It will be necessary to teach him many things which average children learn incidentally.

To perceive differences in words requires the ability to make associations and inferences. The slow-learner does not easily learn words just by being exposed to them several times. He needs to be taught various methods of word recognition in order to learn to read independently. If he is expected to attain an independent reading level, he needs to be taught to use phonetic and structural analysis as well as context and configuration clues to aid him in recognizing strange words.

5) *He has a poor memory and a short attention span.* Short frequent periods of instruction are more effective than a long period. Make learning tasks short, purposeful, and meaningful. Many repetitions, frequent reviews, and distributed drills will aid memory. In the initial stages of book learning select books that have much repetition of vocabulary and come within the experience of the child. Through varied drills and games develop a sight vocabulary of words that he will need in his reading.

6) *Often he lacks experiences which would help him to understand what he reads.* Provide readiness for each reading lesson. Simple experiences in the classroom, pictures and illustrations, and the relating of personal experiences by the teacher or pupils will help to build up the necessary background and concepts for understanding. In the selection of reading matter it is advisable to follow the interests of the children or to build up interests in worth-while experiences from which reading can develop. Vocabulary needed for the lesson should be developed during the readiness activities and should be followed by meaningful drill.

7) *He may lack self-confidence due to repeated failures.* Give him easy tasks in which he can be successful. Recognize the least success and make the child aware of his progress. Display good work done by the pupil. Overlook the use of crutches such as using a marker or pointing with the finger if it gives him more security. He will discard the crutches when he no longer feels the need of them.

Materials for the Teen-Age Slow-Learner

In our experience slow-learners who have reached a high third, a fourth, or a higher grade reading level by the age of fourteen or fifteen, prefer reading from children's newspapers such as the *Weekly Readers*[1] or the *Junior Catholic Messenger*.[2] They also choose magazines and informational books dealing with social sciences, health, personal development, and the like in preference to a basic reader. They do not as a rule progress to a much higher level but they are anxious to broaden their store of general knowledge.

The children's news weeklies contain items of current and historical interest as well as feature articles that can be used as the basis for informal science, geography, health, or safety lessons. If properly presented many of these articles will lead children to look elsewhere for further information. For example, a teacher had used the *World Book Encyclopedia*[3] several times to supplement illustrations and materials in the weeklies. The children in her group began to ask of their own accord, "Sister, may I get the *World Book* and find some more about this?"

An example of a unit that met with enthusiastic response from a group of teen-age girls at the St. Coletta School for Exceptional Children, a residential school for retarded children, was a study of their school. Included in the study were the purpose of the school, its patron saint, its history, and its various departments. The aims of the unit were to instill in the pupils an appreciation of the opportunities offered them in a special school, to inculcate habits of acceptable behavior, and to increase facility in the language arts, particularly in reading, through highly motivated learning situations.

A new chapel was under construction, and the girls were keenly interested in noting the progress of the building from day to day. This led to an interest in the history of the school. Some of the questions they wanted answered were: "How did it start?" "When did it start?" "Who started it?" "Are they still living?"

An old catalogue with a picture of the first school building stimulated the desire to know more about it. A chart with a map showing the location of the school and indicating with stars the states and countries represented by the children at the school was prepared. Little flags with the names of the girls in the

[1] Johnson, Eleanor, Editor, *Weekly Readers*, American Education Press, Middletown, Conn.

[2] Pflaum, George A., Editor, *Junior Catholic Messenger*, George A. Pflaum, Inc., Dayton, Ohio.

[3] Caswell, Hollis L. (Chairman, Education Advisory Board), *World Book Encyclopedia*, Field Enterprises, Inc., Chicago, Illinois, 1954.

class printed on them were pinned on their home states on the map. The fact that children from 34 states and two foreign countries were at the school was an amazing discovery.

Reading material for the unit was prepared on two levels. For those doing primary reading, charts were constructed. Some, such as the one on the history of the school, were prepared by the teacher. Others dealing with familiar places in the school were written as experience stories by the class and reproduced on charts with pictures to illustrate them. All the stories were eagerly copied by the girls into individual booklets to be taken home with them. "I want to learn to read it so I can read it to my mother when I go home" was one girl's enthusiastic comment. Word games resembling Bingo were used to give needed drill on vocabulary.

For the girls on an intermediate level, reading lessons and worksheets were sometimes prepared by the teacher. At other times teacher and pupils together composed the stories as a language activity. Pupils expressed their preferences for the latter type. They wanted their books to be written in their own handwriting rather than to be typed or hectographed.

The following is an example of the type of lessons prepared by the teacher. Before presenting the lesson a visit was made to the Serra Home guest house on the school grounds, and the charts prepared for the primary group were discussed by the entire class. Vocabulary was introduced during the discussion and the meaning of unfamiliar words clarified. The following letter written by Joan provides a wide vocabulary for study.

St. Coletta School
Jefferson, Wis.
June 22, 1953

Dear Aunt Mary:

Daddy, Mother, and Janice were here to visit me last week. I spent Saturday night and all day Sunday with them at the Serra Home. Staying at the Serra Home was just like being away from school and living in a hotel. That's just what the Serra Home is, a hotel right next to our school. This was the first time I spent the night there. It is such a lovely place that I must tell you all about it.

Miss Flora Lutfring met us at the door. She is the kind of hostess who takes care of the office work. She does all she can to make our stay pleasant. While she checked our room reservations, we rested in lounging chairs and divans in the lobby. A large mirror over an open fireplace reflects the whole length of this beautiful room.

We had two adjoining bedrooms on the second floor. The guest house is five years old, but the rooms look just like new. Sister Fidelis teaches the girls who work there how to make the beds neatly and how to care for and clean the rooms. The bedrooms all have twin beds. Each room is furnished to match the pastel tile showers. The hand carved crucifixes in the rooms are imported from Switzerland.

Sister Carol Ann and Sister Demetria prepared delicious meals which were served to us in a spotless dining room. The girls who are in training there served them to us. Most of the food is home grown and home prepared.

On the ground floor there is a rumpus room where we can play games, watch television, listen to the radio, or just visit.

If you plan to stay at our lovely guest house when you come to visit me, be sure to ask for room reservations in advance.

Love,
Joan.

The following exercises may be used in teaching the vocabulary of above letter.

Learning words

Match each word with its meaning. Write the number of the word in front of the meaning:

1. hotel
2. hostess
3. reservations
4. lobby
5. reflects
6. lounging chairs
7. divans
8. adjoining
9. pastel

..... sofas
..... to give back an image
..... a waiting room
..... soft and light color
..... place to stay and eat arranged for ahead of time
..... easy chairs
..... next to each other
..... a woman who receives and entertains guests
..... guest house

How Well Did You Read?

1. The Serra Home is a private .....
2. Miss Flora Lutfring is the .....
3. The hostess checks the ..... reservations.
4. There are easy ..... and divans in the lobby.
5. There is a ..... above the fireplace.
6. The girls learn to make beds .....
7. How many beds are there in each bedroom? .....
8. The crucifixes were made in .....
9. The meals are prepared by ..... and .....
10. You may play games in the ..... room.

More Work With Words

Use these words in sentences of your own: adjoining, lounging, reflects, furnished.

Specific Disabilities

Teen-age children who have had repeated failures in reading have feelings of frustration and dislike for reading. As stated previously, these children must be given easy materials at which they can certainly succeed in order to build up their confidence. The teacher must try to diagnose the cause or causes of the disability and attempt to remedy the same. A

child whose reading age is definitely below his mental age, whose I.Q. is above 60, and whose reading ability is below fourth grade, may need individual remedial measures to overcome his specific difficulties. Any method or combination of methods that works may be used, but once a method is adopted it should be adhered to long enough to give it a fair try.

That slow-learners benefit from a remedial program has been proven by various experts in the field, but perhaps an actual case study will help to strengthen the point.

Jean was admitted to the St. Coletta School for Exceptional Children at the age of 12 years and 6 months. She had been in the sixth grade in her previous school but was unable to do the work of the grade and was becoming very frustrated and unhappy. At the time of her entrance Jean rated an I.Q. of 73 on her Revised Stanford Binet Test, giving her a mental age of 9-4. During testing the following traits were observed: Jean was shy and reserved but quite cooperative. She showed good general knowledge, but seemed deficient in reading. Compehension seemed better than memory, and she showed insight into problem situations.

Her reading achievement on the Coordinated Scales of attainment at this time was 2.4, reading age 7-7, almost two years below her mental age. Her sight vocabulary was very limited and auditory discrimination and memory very poor. She did not appear to be aware of the sound elements in words and their visual symbols. Her only method of word attack seemed to be the use of context clues.

During her first year at the school, Jean was placed with a small group of girls who were being given practice in auditory and visual discrimination using exercises based on *Building Word Power* by Durrell, Sullivan, and Murphy.[1] The Dolch Sight Words were taught by a visual method using individual flash cards. The formal reading during this year was limited to one first reader. This was supplemented by the reading of weekly letters to parents which were written in school as a part of the language program. Jean's reading achievement at the end of the school term was 2.7. This was not considered a satisfactory gain since it left Jean still two years below her mental age in reading.

Intensive individual word study was begun with Jean during the month of June, since she remained at the school although classes were not in regular session. The Hegge, Kirk and Kirk *Remedial Reading Drills*[2] were used to develop a phonic method. Drill was continued on the Dolch Sight Words not yet mastered. About four hours a week were devoted to these exercises. When her parents called at the school to take Jean home for vacation she brought them to the classroom and proudly displayed some of her newly acquired ability to sound words.

With the reopening of classes in September the Hegge, Kirk and Kirk *Remedial Reading Drills* were continued but, with classes in regular session, it was not possible to devote the same amount of time to individual work with Jean. *Phonics We Use,* by Meighen,

[1] Durrell, Donald D., Helen B. Sullivan, and Helen A. Murphy, *Building Word Power,* World Book Company, Yonkers-on-Hudson, New York, 1945.

[2] Hegge, Thorleif Gruner, Samuel H. Kirk, and Winifred D. Kirk, *Remedial Reading Drills,* George Wahr, Ann Arbor, Michigan, 1946.

Using flash cards to strengthen the use of difficult words.

Pratt[1] and others was also used. No book reading was done but Jean was intensely interested in the *Junior Catholic Messenger,* which the more advanced pupils in the class were reading. Although she could not read the paper intelligently herself due to lack of word recognition, she added much to the liveliness of the discussions by her questions and comments.

After the completion of 24 drills in the Hegge, Kirk and Kirk *Remedial Reading Drills,* Jean asked, "Am I going to get a book to read pretty soon?" She was allowed to select one she thought she would like and would be able to read. Her selection was a second level third reader of the Faith and Freedom Series. Knowing this to be too difficult the teacher suggested *This Is Our Parish,*[2] the second level second reader of the same series. Individual word cards were made for new words and drills similar to those for sight words were employed. Ten to fifteen words were taken at a time depending on their difficulty. If the word was recognized, an "x" was put in one corner of the card. If not, a check was placed there. The entire pack of cards was taken three times in succession at each period, the cards being shuffled before each exposure. During the next drill period another corner of the card was used to record successes and failures. When a card had all "x's" for two days it was put with a review pack and a new word took its place in the regular pack.

Words mispronounced during a review were returned to the regular pack for additional drill. Other girls were allowed to help Jean with her words if their time permitted. The Hegge, Kirk and Kirk *Remedial Reading Drills* were discontinued at this time, and the principles learned were applied to new words as they were introduced.

The remark Jean made to her teacher in January, "You know, Sister, I like reading better now than I used to," is evidence that she is benefiting from this program. More significant, perhaps, is the objective proof from the standardized test given in February showing an achievement of 3.8 as compared to 2.7 in the previous test. Jean is still receiving the individual help in word study, has nearly completed the book *This Is Our Parish,* is using the accompanying workbook for silent reading, has completed *Phonics We Use,* Book B, and is working in Book C of the same series. The puzzled frown and question, "Sister, what does it say?" is now frequently replaced by a triumphant smile and the words, "Sister, I read it!"

[1] Meighen, Mary, Marjorie Pratt and others, *Phonics We Use,* Lyons and Carnahan, New York, 1946.

[2] Sister M. Marguerite and Catherine Beebe, *This Is Our Parish,* (Faith and Freedom Series, Grade II,) Ginn and Company, Boston, 1952.

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Conserving Values . . .

(Continued from page 4)

Conservation of mineral resources calls for wise use and the avoidance of waste because only a limited supply exists. Conservation of biological resources such as forests, fish, and wildlife calls for harvesting on a sustained yield basis. The resources we are thinking about, under proper conditions, can replace themselves. Conservation of values involving, as they do, human behavior calls for exercise. We do not have to hoard them nor do we have to grow replacements. On the contrary, resources of this sort thrive and develop through application.

Take sensitivity to other people. A person who is treated with callousness tends to respond with callousness. On the other hand, if people show esteem for him as an individual, he is likely to return esteem and consideration. Another Vermont story is about a fresh-air child from the sidewalks of New York who was spending part of the summer on a Vermont farm. He found a toad, something which he had never seen before. He poked it with a stick and found that the toad jumped. He poked him again, another jump. After a while he began to hit the toad with brutal blows, and this brought remonstrance from his playmate, the farm boy. "Stop that, don't hit that toad!" The city boy went right on. "Why can't I hit him? He's my toad, isn't he?" "No, he's not your toad." "If he's not my toad, who's toad is he?" A pause. "In Vermont he's his own toad." By showing that we recognize that each person is "his own toad," so to speak, we engender that attitude in others.

Faith in group effort is obviously something which grows with experience. Our schools are doing much to develop this faith through group activities. Encouraged by the Citizen's National Commission for the Public Schools and other agencies, our citizens in general are strengthening this faith through exercising it. Our own professional group, through greatly intensified activity at national, state and local levels during the past several years, is cultivating this value. Two points in this connection are worthy of note. Group effort, which is aimed at serving narrow, selfish group interests, degenerates into gangsterism. The obvious role of educational leadership in a democracy is to see to it that group effort is directed toward the good of all. In our rural communities, where it is easier to see life whole and where the sense of community can better hold factional interests in balance, it is easier to discern and to work for the good of all. The other noteworthy point is the matter of know-how. How many meetings have you attended which seemed to end in no fruitful outcome? The growth of citizens' study groups, lay committees, and the like is based on a noble vision. But it is all too likely to end in frustration unless people with understanding of the process and the necessary pains and the disappointments which accompany it give wise guidance. The present generation of adults has had all too little practice in the solution of practical first-hand social problems.

As for solitude, if its values are to be conserved, it needs to be practiced. It is proper that our schools should give practice in group endeavor and devote attention to constructive social adjustment, but the child's social needs should not be permitted to crowd out attention to his ego needs, his need to attain selfhood. This requires allowance for reflection, for the creative silence, whether in group discussion or in the process of individual assimiliation of new ideas. Solitude is not the same as isolation, and the person who develops soundly as a self-reliant individual can also be the greatest contributor to group effort.

In a propaganda-ridden world where public relations men undertake to substitute for sound political performance we have particular reason to welcome and use the opportunity for concreteness. I will give two illustrations of what I mean. Unfortunately too many schools still teach conservation primarily out of books and pamphlets. Even film strips and moving pictures do not correct the radical defect in this sort of performance. The virtue of the rural community is that conservation is in it and all around it, right in the school yard and in every field and woodland in the surruunding countryside. The need for spreading deeper understanding of conservation through community schools has become well recognized. Perhaps we need to remind ourselves too that through the opportunity to build understanding on concrete experience, this field displays peculiar psychological merit.

(Continued on page 32)

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How to Use a Fractional Divisor

By Foster E. Grossnickle

There are many different ways to divide by a common fraction. The two most familiar methods are (1) by inverting and then multiplying and (2) by expressing both divisor and dividend as fractions having the same denominator and then dividing the numerators. In this article we shall refer to the first method as the *inversion method* and to the second method as the *common denominator method*. The two methods may be illustrated by dividing in the example, ¾ ÷ ½ as follows:

Inversion Method:

$$\frac{3}{4} \div \frac{1}{2} = \frac{3}{4} \times \frac{2}{1} = \frac{6}{4}, \text{ or } 1\tfrac{1}{2}$$

Common Denominator Method:

$$\frac{3}{4} \div \frac{1}{2} = \frac{3}{4} \div \frac{2}{4} = \frac{3 \div 2}{4 \div 4} = \frac{3}{2}, \text{ or } 1\tfrac{1}{2}$$

There is a limited amount of experimental evidence to show that one method of dividing by a fraction is superior to another method. Brownell [1] reported a brief study which indicated the superiority of the common denominator method. He suggested that this method might be superior to the inversion method for the slow learners. Then, too, there is the added argument that the work would be more meaningful to the pupil when he expresses the numbers to be divided as fractions having the same denominator. If the dividend is an integer, as in the example, $3 \div \frac{3}{4}$, the integer would be expressed as an improper fraction having the same denominator as the denominator of the divisor. The division process in the example, $3 \div \frac{3}{4}$, then would be performed as

$$\frac{12}{4} \div \frac{3}{4} = \frac{12 \div 3}{4 \div 4} = 4.$$

The inversion method is extremely difficult for the pupil to understand. As long as division of fractions is taught in grades 5 and 6, it is reasonably certain that few pupils will understand the process. In most cases the pupil does a mechanical operation when he inverts and multiplies. Those who believe that all work in arithmetic should be meaningful to the pupil would find this method unsatisfactory for dividing by a fraction.

Dickey [2] constructed a piece of apparatus to show how to invert the divisor. He devised a rotating block on which a given fraction could be shown and then by rotating the block the inverted form of the fraction would be shown. His plan was a mechanical operation to illustrate the inverted form of a fraction, but this operation would not enable a pupil to understand why a given fractional divisor should be inverted.

Making the Work Meaningful

It is necessary to understand what is meant by making the work meaningful to a pupil. Brownell suggested that there are three phases to meaning in arithmetic.

> The essential meanings of arithmetic, apart from such uses as involved, for example, in mensuration are:
>
> 1. Meanings of whole numbers, common fractions, decimals, and per cents, together with understanding of the number system and of place values.
>
> 2. Understanding of the functions of the basic operations of addition, subtraction, multiplication, and division.
>
> 3. Understanding of the rationale of computations, — the forms used, the placement of partial products, of quotient figures, and the like.[3]

The writer accepts the first and second principles formulated by Brownell, but not the third principle in all of its implications. A pupil need not understand all of the steps in a process, such as division by a two-place number or by a fraction, in order to have meaningful learning. Much of the process, called the algorism, may be largely mechanical in these operations. Meaning does not imply that all of the sequential steps must be understood. Most pupils in the intermediate grades are unable to understand why the divisor should be inverted in division of fractions. The mathematical principle involved in the process is too technical for them to understand. Christofferson [4] holds to the opposite view, but the experience of classroom teachers will not substantiate his opinion.

Inverting a fractional divisor makes the effective divisor 1. In the example, $6 \div \frac{3}{4}$, which may be written as $\frac{3}{4}\overline{)6}$, both divisor and dividend may be multiplied by the same number without changing the value of the example. If ¾ is multiplied by $\frac{4}{3}$, the divisor becomes 1. If ¾ is multiplied by $\frac{4}{3}$, then 6 must be multiplied by $\frac{4}{3}$.

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The final form of the example may be expressed as

$$\frac{4}{3} \times \frac{3}{4} \overline{)\frac{4}{3} \times 6}, \quad \text{or} \quad 1\overline{)8}, \quad \text{or} \quad 8.$$

The conventional pattern for writing the example in short form is

$$6 \div \frac{3}{4} = 6 \times \frac{4}{3} = 8.$$

The mathematical steps and sequences involved in the operation are too involved for most pupils in the intermediate grades to understand. As long as division by a fractional divisor is taught in grades 5 and 6, most pupils at these grade levels will not understand the mathematical meanings of the inversion algorism.

In such difficult processes as division by a two-or-more- place divisor or by a fraction, meaning implies that a pupil should be able to state whether or not an answer is sensible. One of the most difficult examples in division of whole numbers is shown on the right. The writer has found that many pupils in the advanced elementary grades will give the answer as indicated. If a pupil understands what division means and how to approximate the answer, he should know that the 5 in the quotient represents 5 hundreds, hence the answer must be 570 r3 and not 57 r3. He need not understand all of the sequential steps in the algorism. He must know and be able to demonstrate what division is and must be able to tell if the answer is sensible. The rationale of the algorism may be considered enrichment for the superior pupil. Very few pupils in the elementary school will profit from instruction aimed to teach the rationale of a difficult process. Meaning in division with a fractional divisor implies that a pupil is able to determine if the answer obtained is sensible. In the example, $\frac{2}{3} \div \frac{3}{4}$, the pupil should see that the quotient will be less than 1 because the dividend, $\frac{2}{3}$, is less than the divisor, $\frac{3}{4}$. Therefore if the dividend instead of the divisor were inverted, a common type of error, the quotient would be greater than 1 as shown.

```
   57r3
16)9123
   80
   112
   112
     3
```

$$\frac{2}{3} \div \frac{3}{4} = \frac{3}{2} \times \frac{3}{4} = \frac{9}{8}, \text{ or } 1\frac{1}{8}.$$

The pupil should know that the answer given in the solution cannot be correct because the quotient must be less than 1. Then he has a means of checking on the reasonableness of the answer. In case the answer is not sensible, he should be able to find the correct solution. When a fraction is divided by a fraction, the answer can be checked to see if it is sensible by the following three generalizations which the pupil should understand:

1. A number divided by itself is 1.
2. A larger number divided by a smaller number has a quotient greater than 1.
3. A small number divided by a larger number has a quotient less than 1.

A fourth generalization also is essential for dividing a whole number by a proper fraction. In an example of this kind, the quotient is greater than the dividend, because the divisor is less than 1. The pupil should discover this principle from meaningful experiences as will be shown later in this article.

A pupil has the essential understanding for determining whether an answer is sensible in division of fractions if he is able to make the following generalizations about the answers in the given examples.

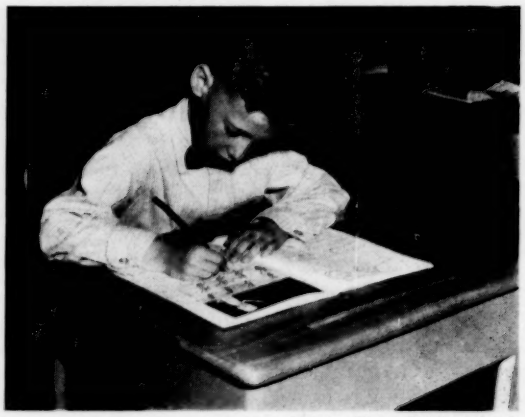
a. The quotient must be less than 1. (Principle 3) a. $\frac{2}{3} \div \frac{5}{6}$

b. The quotient must be greater than 5. (Principle 4) b. $5 \div \frac{3}{4}$

c. The quotient must be less than 1. (Principle 3) c. $\frac{7}{8} \div 1\frac{3}{4}$

d. The quotient must be greater than 1. (Principle 2) d. $6\frac{3}{4} \div 5\frac{1}{2}$

In each example above, the pupil inverts the divisor, a mechanical process, and completes the solution. Then he checks to see that the answer is sensible. If the answer does not agree with a sensible check, he looks for the source of error.



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The fallacy of the common denominator method of dividing by a fraction can be illustrated in an example of the type, $\frac{2}{3} \div \frac{3}{4}$. According to this method, the solution would be

$$\frac{2}{3} \div \frac{3}{4} = \frac{8}{12} \div \frac{9}{12} = \frac{8 \div 9}{12 \div 12} = \frac{8}{9}$$

The pupil who is unable to estimate if the answer is sensible often encounters difficulty in dividing the numerators. In this example it is necessary to divide 8 by 9. Many pupils divide in the reverse order and find the answer to be $\frac{9}{8}$ instead of $\frac{8}{9}$. Therefore, to have the division process meaningful, the pupil must know how to check on the reasonableness of the answer. The fact that the two fractions to be divided are expressed as like fractions is of minor value in understanding the mathematical meaning of the division process. The important phase of significant meaning consists in knowing with assurance that the answer is sensible.

Teaching Division with a Fractional Divisor

A skillful teacher should provide a variety of different meaningful experiences when she introduces a new topic to her class. A problem situation may call for finding how many $\frac{3}{4}$-yard pieces can be cut from 6 yards. The teacher should have the class find the answer by most or all of the following ways:

1. From a string 6 yards long, measure off $\frac{3}{4}$-yard pieces.

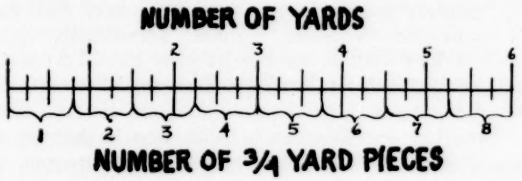
2. Make a diagram to represent 6 yards and divide each yard into quarters, and then mark off ¾-yard segments as shown. Circles may be used instead of a line.

3. Subtract ¾ from 6 until the remainder is zero.

4. Add enough ¾'s to have a sum of 6.

5. Show by multiplication that since $8 \times \frac{3}{4}$ is equal to 6, then $6 \div \frac{3}{4}$ must be 8.

6. Show why the answer must be greater than 6.



The pupil measured or subtracted ¾-yards from 6 yards. Each piece was less than 1 yard; therefore, the number of pieces would be greater than 6. Since the divisor is less than 1, the quotient must be greater than the dividend. If the divisor were ½, the quotient would be 12. The divisor is greater than ½ but less than 1; hence the quotient must be greater than 6 but less than 12. The answer 8 is sensible.

7. Finally, the teacher should show the class that the answer can be found by inverting the divisor and multiplying. Thus, $6 \div \frac{3}{4} = 6 \times \frac{4}{3} = 8.$ This step may be mechanical, but the pupil knows with confidence that the answer is sensible. He also knows that the answer is correct if he made no computational errors. He knows longer ways to find the answer if he should forget the algorism. Therefore, meaning in division with a fractional divisor implies that a pupil may use a mechanical means to find an answer which he can check easily to see if it is sensible. If he forgets the algorism for completing the process, he is resourceful enough to use other longer forms to find the answer.

This article emphasizes the view that it is not necessary for a pupil to understand the entire rationale of a difficult process, such as the use of a fractional divisor. Meaning in arithmetic does not imply "all rationalization and no mechanization," but instead it implies that there should be a minimum of mechanical operations. When part of a difficult algorism is performed mechanically, there must be a rational check applied to the use of that mechanistic procedure to see that the answer is sensible. In light of this practical interpretation of meaning, it seems plausible to recommend that a pupil should invert the divisor and multiply when dealing with a fractional divisor.

---

[1] Brownell, William A., "Two Kinds of Learning in Arithmetic," *Journal of Educational Research* 31, May, 1938, 656–64.

[2] Dickey, John W., "Experimenting with Apparatus in Teaching Division of Fractions," *National Elementary Principal* 16, July, 1937, 419–26.

[3] Brownell, William A., "When Is Arithmetic Meaningful?" *Journal of Educational Research* 38, March, 1945, 484.

[4] Christofferson, H. C., "Division by a Fraction Made Meaningful," *Mathematics Teacher* 41, January, 1948, 32–35.

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NEW BOOKS

Publications in Health Education of Particular Interest to the Classroom Teacher

Health Education has been defined as the sum of the experiences which favorably influence practices, attitudes, and knowledge related to health. (5) Although the primary responsibility for a functional health program belongs to the school administrator, the role of the elementary school classroom teacher is of extreme importance. A good teacher is always, at least in part, a health educator. The teacher needs to know the signs of health in children, how they grow and develop. She must become aware of the environmental factors which influence healthful living. It is necessary for the teacher to be intelligently informed regarding health matters that affect young children. She must develop skill in organizing and directing learning experiences which promote the health knowledge, attitudes, and practices of the children under her guidance.

Obviously the teacher cannot become completely competent in the area of health education without access to proper source materials which can be of vital assistance to her. This review will endeavor to acquaint the classroom teacher with some of these sources of information.

Basic References

Health Education[5], is still an excellent reference source although it is not as recent a publication as some of the other books to be discussed. This book covers, among others, the following topics which have particular value for the classroom teacher: 1) Health Education in the Elementary School, 2) How to Use Audio-Visual Materials, 3) Finding and Using Resources, 4) Evaluation in Health Education, 5) Health Education in Action (Kindergarten through Grade VI), and 6) A Dozen Big Health Problems. (These problems include: Food and Nutrition; Exercise, Sleep and Rest; Vision and Hearing; Mental Hygiene; Sex Education; Alcohol and Tobacco, Colds and Other Respiratory Diseases; Other Communicable Diseases; Heart Disease and Rheumatic Fever; Dental Caries; Accidents, Cancer.)

A few significant quotations include the following:[5]

> "It is a medically important fact that in children the early symptoms of a cold closely resemble those of scarlet fever, poliomyelitis, and certain other dangerous diseases..
>
> "In the lower elementary grades most health instruction will be informal. In the upper elementary grades there is need for a more systematic type of program. These intermediate grade children want to know 'why' they should do certain things, such as brushing their teeth."

Another excellent basic reference is that by the American Association of School Administrators entitled *Health in Schools.*[1] Some of the topics discussed that merit the particular attention of the classroom teacher include: Health of School Personnel, Health Problems of the Individual Child, Mental Hygiene, Health Aspects of Special Education, Health Appraisal and Counseling, Injuries and Emergency Illness, and Interaction of School and Community.

The importance of teacher health and its relationship to the health, happiness, and learning efficiency of the pupils is brought out significantly in a chapter on the health of school personnel. The chapter dealing with the health problems of the individual child contains some interesting information and gives examples of good case studies. The discussion of health appraisal and counseling, the nature and function of the health history, medical and dental examinations, teacher observations, screening tests, psychological tests, health counseling, and cumulative records are carefully and objectively presented. The specific responsibilities of the classroom teacher are listed to indicate that the role of the classroom teacher is a key one indeed in this aspect of the school health program.

Observations of Health Behavior

The importance of teacher observations of the health behavior of school children is readily acknowledged. An excellent book devoted to this entire problem is that by Wheatley and Hallock entitled *Health Observations of School Children.*[6] Various pertinent topics discussed include: discussion of the various body systems, the health problems involved that affect school children, growth and development problems, and the art of observing children.

In discussing the value of teacher-parent observations, the authors point out that the chief value of the teacher's observations, as far as getting the child to the doctor for needed medical attention is concerned, lies in the fact that they are likely to be more objective than those of parents. A mother may actually be too close to a child to notice a slowly developing defect. Also, children like everyone else have little personality quirks, and these are often so familiar to parents that they may quite effectively disguise a developing defect. Even obvious signs of

trouble such as decayed teeth, poor posture, chronic "sniffles," excessive overweight, and behavior difficulties of various kinds may be disregarded at home either because "familiarity breeds contempt" or because such conditions do not seem to have any appreciable direct effect on the child's general health. In a school with a well-organized health service program, the teacher has an opportunity to discuss all such problems with the school nurse or school physician. In schools without such facilities, she may carry her concern directly to the parents. In either case she is able to perform a real and lasting service for a child by calling attention to departures from good health which otherwise might be neglected.

The chapter dealing with the Nervous System and related health problems is one of vital concern to the classroom teacher. Some pertinent quotations include:

> "Sometimes somatic manifestations are mechanisms used by the child to get satisfaction for some need inadequately met during earlier periods of his life, or to express resentment against his parents, or to punish himself for harboring hostile feelings. Many of them are connected with his mouth or the function of eating, vomiting, finger sucking, nail biting, overeating, speech disorders. Others are related to bowel and bladder functions such as constipation and urinary frequency.
>
> "Teachers may seldom encounter full-blown neuroses in their students. However, neurotic tendencies are quite common in children. It is usually possible to arrest the development of such trends if the child's teachers and other adults intimately associated with him understand their significance and give him reassurement."

Child Growth and Development

An exceptionally good book dealing with the study of child growth and development is *These are Your Children.*[1] This text, originally printed in 1949, was developed in 1953 into an expanded edition. In the preface the fundamental concepts of the book are explained as follows:

> "First, an effort has been made to show the infinite variation upon a basic sameness that is found in all our children.
>
> "Second, emphasis is placed upon the fact that growth is a continuous process.
>
> "Third, the influence of a child's first years on his growth and development is stressed."

This book is very well written and contains numerous illustrations and charts which are most helpful. Of particular value are the charts in which each age group is discussed according to physical development, characteristic reactions, special needs, and aids to development. Also included in this fine book are descriptions of representative child research centers, showing how information such as is presented in this book is procured. Information is also given regarding sources where one may obtain booklets, charts, graphs, pamphlets, and monographs. The annotated bibliography found at the end of the book is both extensive and selective. This book is recommended for both teachers and parents.

Health Service

School Health Problems[2] by Chenoweth and Selkirk, goes into considerable detail regarding the Health Service aspect of the school health program. Some of the chapters containing significant information for the classroom teacher include: Growth in Children, Nutrition, Physical Examination, Teacher Observations, Vision, Hearing, Dental Health, Childhood Diseases, Health of the Teacher, and The Accident Problem. The chapters dealing with vision and hearing are very good because of the detailed descriptions given of various screening devices. Many fine illustrations are helpful to the reader. The chapter dealing with special classes for handicapped children is indeed informative and is well illustrated. The references at the end of each chapter are current and represent good sources for further investigation.

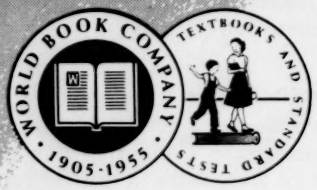
Health Instruction

In the Area of Health Instruction, Grout's book entitled, *Health Teaching in Schools,*[3] is very good. According to the author the book serves a three-fold purpose:

> "First, it provides the teacher with up-to-date information on the health needs of the child, home, school, community, and suggests how these needs may help point the direction of health instruction.
>
> "Second, it highlights principles and procedures of modern education and shows how these may apply in health teaching.
>
> "Third and most important, it furnishes the teacher with concrete materials to help him plan and carry out effective health teaching."[3]

This book contains many illustrations and practical examples of health teaching which should be most helpful to the classroom teacher. The common health needs of the school child are discussed under these headings: Food and Eating, Elimination and Body Wastes, Exercise and Play, Sleep and Rest, Eyes and Ears, Teeth, Posture, Illness and Disease, Accident and Injuries, Emotional Adjustments. Home health needs are listed as: Human Relations in the Family, Preparation for Parenthood, First Aid and Home Care of the Sick, Housing, Heating and Ventilation, Lighting, Sanitation, Control of Pests, Home Safety. School health needs involve: a Healthful School Environment, a Functional Health Service Program. Community needs include: Environmental Sanitation, General Measures for Disease Prevention and Control, Community Safety, Facilities for Health and Medical Care.

The chapter dealing with planning for health education within the school centers the discussion around the following suggested basic principles:



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"1) Planning in health education should be an integral part of over-all curriculum planning.

2) Health education planning should be the responsibility of the entire school personnel.

3) Pupils should share in planning activities.

4) Planning for health education within the school should be an integral part of the total planning for health in both the school and community.

5) Assistance from the community should be sought in the planning process.

6) Planning should be continuous.

7) Leadership should be provided.

8) Planning should result in action."

The elementary school classroom teacher will find the chapter on Guides to Health Teaching in the Elementary School a most vital and functional one. Its purpose is to provide practical suggestions for carrying out teaching activities. However, the author carefully points out the *details must be worked out locally and in relation to the needs and interests of specific groups of children in specific schools and communities.*

The material is grouped according to three grade levels: kindergarten, primary grades (1-3), intermediate grades (4-6). For each level the factors that will help determine *what* to teach and *how* to teach are first outlined. (These factors include: 1) health needs, interests, and beliefs related to the growth pattern, 2) interests and adjustments in respect to home, school, and community living, 3) course content in related areas of learning.) These factors are followed by suggestions for health teaching *emphasis* based on an analysis of these factors. Finally, ideas for teaching or learning experiences are included, many of which are examples taken from actual classroom situations.

Clifford A. Boyd

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[1] American Association of School Administrators, *Health in Schools*, Washington, D. C.: American Association of School Administrators, 1951.

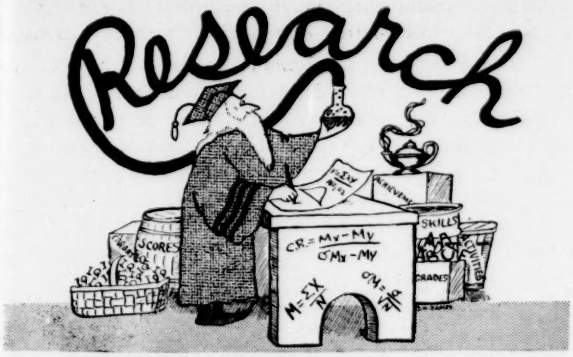
[2] Chenoweth, Laurence and Theodore Selkirk, *School Health Problems*, New York: Appleton-Century-Crofts Co., 1953.

[3] Grout, Ruth, *Health Teaching in Schools*, Philadelphia: Saunders Co., 1953.

[4] Jenkins, Gladys, Helen Schacter, and William Bauer, *These Are Your Children*, Chicago: Scott Foresman Co., 1953.

[5] Joint Committee of the National Education Association and the American Medical Association, *Health Education*, Washington, D. C.; NEA, 1948.

[6] Wheatley, George and Grace Hallock, *Health Observations of School Children*, New York: McGraw-Hill Book Co., 1951.



Some Implications and Practical Applications of Recent Research in Science Education

By George Greisen Mallinson and Jacqueline V. Buck

In science education, as in every other area of education, a great many investigations have been undertaken in order to solve many of the related problems. For the most part these individual investigations are merely "drops in the bucket," and a large bucket at that! But, during the years, the "bucket" is being filled gradually, and a survey of the accumulated "drops" reveals much progress toward solving the problems.

Few science teachers, however, have either the time or the publications available to read thoroughly all the research that has been produced in the field of science education. Yet nearly all of them are interested in learning some of the implications and practical applications of these studies. Hence, this review is an attempt to provide science teachers with such information, namely a non-technical summary of the findings of recent research studies in science education.

Obviously in a report of this type it would be a tremendous task to cite individually all the several hundred contributing investigations as well as discussing their methods and findings. Further, it would serve no useful purpose. Hence, such citations will be left to the more technical, detailed reviews of research in science education.

For convenience, the studies have been summarized under the following major headings: (1) THE SCIENCE CURRICULUM, (2) THE TEACHING AND LEARNING OF SCIENCE, and (3) THE TRAINING OF TEACHERS.

THE SCIENCE CURRICULUM

The History and Growth of Science Education

According to historical studies the place of science in the secondary school curriculum has been well established for many decades. However, the nature of science instruction in the secondary school has been, and is, changing constantly. In the early days of education, science was considered to be a "mental discipline" course. This meant that young men who were being trained for the professions (and at that time they were about the only ones who attended secondary schools) were taught science because of its value in "training the mind," not because of its practical applications.

In harmony with this philosophy of science education, the "traditional" science courses such as botany, zoology, astronomy, geology, chemistry, and physics established themselves in the secondary schools. It was believed that these "college courses in miniature" served admirably the primary function of the high school, namely, preparing students for college. The non-college students failed to profit from such courses and so many ultimately dropped out.

In contrast, the present era of education is chiefly one of "general education." This implies that the high school is being designed for the education of *all* students, regardless of their future occupational plans. Hence science programs are being modified to meet with the prevailing philosophy. Recent studies indicate that science educators are attempting to develop courses that will offer *all* students a background in science that will enable them to interpret adequately the scientific age in which they live as well as providing them with foundations for later specialization in science.

This change to the general education philosophy is slow, and sometimes painful. Nevertheless the transition is evident in that today about fifty percent of the students in the average high school are enrolled in one or more science courses. The largest enrollments by far are in the general education courses, namely, general science and general biology, the latter being offered in about 95 percent of all high schools. In addition, there is evidence of the steady growth of a new general education course, general physical science. The traditional courses in physics and chemistry, however, are offered in less than one half of the high schools in the country. Further, in many of the schools in which they are offered they are taught on alternate years. The smallest of all science enrollments are of course in the more specialized courses such as physiology, earth science, and botany.

The history of elementary school science roughly parallels that outlined for secondary. However, science was introduced much later to the elementary school than to the secondary and it is still in a state of flux. For many years there was little or no science instruction at the elementary school level, except as it was

taught incidentally with other subject-matter areas. Few adults of the current generation can recall receiving science training in the grades except for occasional lessons in "nature study" in which they may have learned to identify birds or leaves or wildflowers. When it was introduced, elementary school science seems to have grown more or less from the top down. Instead of being developed in terms of what was desirable for elementary school children, elementary school science courses were miniature editions of those taught in high school. However, the importance of an organized program of science in the elementary school, designed with the elementary school approach is currently well recognized. Research workers at the elementary school level are devoting efforts to identifying the elements of science that will enable young children to interpret, at their levels of maturity, the science experiences with which they come in contact. There are still many problems with respect to this type of instruction in elementary school science, but at least it seems to be "here to stay."

Objectives of Science Instruction

Since the objectives of science teaching determine to a large degree the science curriculum, research on curriculum is generally accompanied with research on objectives. Research in the history of the development of the elementary school science curriculum indicates the changes that have taken place in the objectives of science at this level. The evidence shows that the memorization of facts for mental discipline is of no more value as an objective at the elementary school level than at the secondary. However, many studies do show that there are three major objectives of science instruction that apply to all levels, including the elementary. They are the development of the abilities to (1) understand and apply important scientific facts and principles, (2) think critically, and (3) attack scientific problems using rational techniques. Much research has been carried out successfully in identifying the important facts and principles, the elements in critical thinking, and the techniques of problem solving. However, research in science education has much to accomplish in finding the best methods for attaining these objectives.

Course Content

While there is still much "traditional" subject-matter in courses in high school science, the contents of these courses are shifting gradually from an array of logically-organized facts to the study of problem areas that are focused on the experiences that students face at this age level. Research shows that this newer organization of learning experiences is more functional, as well as being more interesting to the student than the older one. Further, this newer approach provides him with information that ramifies into his daily experiences rather than merely providing a list of facts, about 90 percent of which are forgotten within a year after the course is completed. These functional materials actually increase in usefulness with time since they are continually reinforced as students face related experiences from day to day.

The program of elementary school science is changing more rapidly than the secondary. Since elementary science is relatively new and less bound by tradition, teachers are often freer to "break loose" and organize the instruction around cores of material that are important and interesting to children. In harmony with these efforts, there has been a great deal of research concerning definite grade placement of science topics and concepts in the elementary school. However, all studies seem to indicate that any attempt to allocate, for example, concepts of botany to the second grade; concepts of electricity to the third grade; or concepts of zoology to the fourth grade is unrealistic. Research evidence indicates unequivocally that learning is continuous, and that learning patterns vary from child to child. Hence, concepts in any area of science may be feasible elements of content at any grade level depending on the complexity with which they are developed, and the learning experiences that are used to develop them.

Textbooks and Supplementary Materials

A comparison of science textbooks of several decades ago with modern ones is akin to contrasting the "flapper" fashions of the roaring '20's with the current clothing styles. Studies of modern textbooks in science indicate that they are more profusely illustrated, have much more color, are built around problem areas to a much greater extent than the older ones, and have a greater diversity of end-of-chapter activities. However, there is much room for improvement. Many of the suggested activities are out of date, while most of the suggested experiments are still designed around cookbook procedures rather than around problems that stimulate students to think and to experiment inductively.

In addition, the levels of reading difficulty of many textbooks, both elementary and secondary, are often above the levels of the students for whom they are designed. Few books provide for the growth in reading ability from the beginning to the end of the year. Also only a few textbooks bear witness of having technical vocabularies that have been selected by careful research techniques.

Within the last few years some publishers have prepared science units in pamphlet form for use in the science classroom. Many teachers have used these in addition to using magazines, comic books, commercial pamphlets, and government bulletins in science courses. Research studies have shown that all these have great value in motivating students and for supplementing the textbook. However, in the few studies in which the effectiveness of these materials has been compared with that of textbooks, it has been found that textbooks provide the foundational materials just as well and with less effort from the teacher. Thus these materials seem to be well named—"supplementary."

Integration with Other Courses

Within recent years much has been written about the core curriculum and integrated courses. However, there is little research that deals with the integration of science with other school subjects. The research that is available tends to indicate that while it is possible to integrate science materials with materials from other areas there seems to be no significant evidence of any substantial increments in achievement. This is apparently one area in which more research is needed before definite conclusions can be drawn.

THE TEACHING AND LEARNING OF SCIENCE

Teaching the Objectives of Science Education

A great many studies have been conducted to determine the effectiveness of current teaching methods, and to develop new methods of instruction that will be helpful in reaching the desired goals of science instruction. Several conclusions can be drawn. First, nearly all these studies indicate that all the major objectives of science instruction can be accomplished, but any significant accomplishment demands planned and directed efforts. That is, *it is possible* to develop in children the ability to recognize and apply scientific principles, to think critically, to develop attitudes of openmindedness, to be free from superstition, to suspend judgment, and to attack scientific problems using rational techniques. However, one cannot expect that these desirable outcomes are concomitants of the teaching of facts or of incidental efforts. Rather, conscious effort must be put forth to develop them.

Second, the exact method by which these objectives are taught seems to be relatively unimportant. No one method seems to be superior to any other. The most effective method will differ depending on factors such as the age level of the students, the topic being studied, and the personality of the teacher. Again a variety of teaching methods seems to be of greater effectiveness in achieving the objectives of science instruction than one method alone. Hence, discussions, experiments, demonstrations, and projects all are helpful when used judiciously.

Science Interests of Students

Currently one hears much about "meeting the needs and interests of the child." In science education a number of studies have been conducted in an attempt to identify students' interests. These studies have been motivated chiefly by two considerations. Some workers have attempted to identify interest for the purpose of organizing courses of science instruction around the areas of greatest student interest. Others have attempted to identify students with high interest in science in an attempt to guide them into science courses and hence help to alleviate the great shortage of scientists and science teachers.

However, neither of these considerations has been instrumental in achieving especially fruitful results. With respect to the former consideration, findings indicate that children's interests are in general too unstable to be useful in developing the foundations of curricula. A young child may watch a western movie on TV today and hence want to be a cowboy. Tomorrow when he watches Captain Video, he will want to be a space cadet, and day after tomorrow, when his class visits the fire department he will have a great desire to become a fireman. Thus the span of attention on any single activity tends to be short and is directed by ephemeral experiences. Obviously, this example applies to an elementary school child, but similar conclusions can be applied to a somewhat lesser extent to high school students. Studies show that interests are seldom stable until at least late adolescence. Hence, any attempt to organize the foundations of courses around interest is obviously impractical. At best interests seem to be most suitable as "jumping off points" for the introduction of meaningful activities.

With regard to the second major purpose, the results are again rather disappointing. The instability of interest just cited may cause the process of guiding students into careers in science to be misguidance. Thus an attempt to direct students into science courses strictly on the basis of the results of interest tests or questionnaires is of dubious value, and may even be most undesirable.

Audio-Visual Aids

An area in which much research has been undertaken is audio-visual aids. Many studies have been conducted for determining the most effective uses of films, filmstrips, recordings, radio and TV programs and other aids. All these studies seem to emphasize the merits of using audio-visual aids in teaching science. Yet as a group they indicate that no one aid is significantly better than any other, and that the use of a combination of aids is superior to the exclusive use of one. In addition, in the elementary schools, audio-visual aids have great value in assisting teachers who may lack subject-matter background in science.

Evaluation Techniques

Perhaps one of the most difficult, and yet one of the most essential, phases of any instructional program in that of evaluation. To measure effectively and thoroughly all the outcomes of a program of science instruction (or for that matter any type of instruction) is virtually an impossible task. Yet evaluation of some type is necessary. For that reason investigators are constantly attempting to develop new methods of evaluation, and are trying to improve the older methods.

Studies indicate that one of the most widely used techniques of evaluation is the standardized achievement test. Unfortunately, even though science educators agree that they are attempting to teach scientific attitudes and problem-solving techniques, as well as the knowledge of facts, current measuring devices measure little more than factual attainment. Studies show, however, that it is possible to measure the development of scientific attitudes and problem-solv-

ing techniques. Hence, a major problem facing science educators today is that of devising measures of these outcomes that may be used feasibly in the classroom. It would seem that test organizations might well serve the needs of teachers by preparing tests that do measure such objectives, rather than publishing endlessly what has already been shown to be unsuitable.

In addition to teacher-made tests and standardized tests, research shows that other evaluation techniques are sometimes used. In the elementary school especially, observational techniques are often utilized; and in the secondary schools, projects, reports, and experimental work are often used in evaluating the outcomes of learning. However, it is evident that this is one of the areas of science education where a great deal of study still needs to be done.

THE TRAINING OF TEACHERS

Present Status of Science Teachers

In the last analysis, without regard for the equipment available, time allotted, or course organization, the success of any science program depends on the teacher. And, of course, the work of the teacher to a large extent depends on her status and training.

Investigations dealing with the status of science teachers indicate, unfortunately, that the position of science teacher is far from being professionalized to the extent that is desirable. Few science teachers teach science exclusively, a great number of teachers teach one class in science only, and many of our science courses in present-day high schools are taught by people who have had little or no science training. Hence, it would seem that the improvement of science instruction may depend, in a large part, on the extent to which science teaching can become increasingly professionalized.

Competencies of Science Teachers

Consistent with the findings of studies of the status of science teachers, are the findings of studies concerned with the competencies of science instructors. Research indicates that there is a great inequality and lack of uniformity in the types and amounts of scientific training that science teachers have had. Most beginning teachers start their work in small schools where they usually teach generalized courses, or a number of different specialized courses. Yet their college training in science is not designed for such teaching. For the most part, prospective science teachers possess competencies in one or possibly two specialized areas of science. Few have had broad field courses that will enable them to teach the generalized courses in science. In addition, test results indicate that while they may have a knowledge of specialized facts of science, most of them lack the ability to generalize and to apply their scientific knowledge—the very competencies one hopes to develop in students.

The above statements apply, of course, to secondary school science teachers. Yet, the situation with respect to elementary school teachers is even more discouraging. Here many teachers have no formal science training at all, while most have had limited amounts. As a result, elementary school teachers often avoid teaching science.

Training Programs for Science Teachers

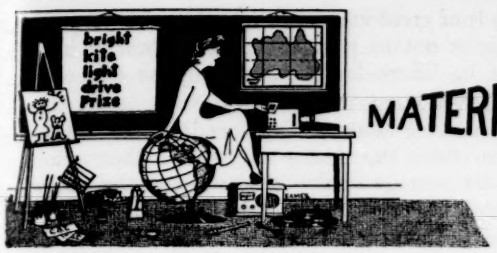
One major cause of the situation just described is the failure of state certification agencies and colleges to evaluate and standardize their requirements. Studies of such requirements indicate a great diversity among the requirements of various states for teacher certification and among various teacher-training colleges for graduation. It is obvious that the states and colleges need to investigate the amount of science background that is desirable in the preparation of science teachers at both the elementary and secondary levels. Much attention needs to be paid also to the type of training that is desirable. A survey of the opinions of administrators with respect to the types of training that they would like their teachers to possess reveals that the vast majority of them prefer a teacher with extensive training in many fields, rather than intensive training in one area. Currently colleges are failing to provide such training. Even if requirements for training teachers were changed immediately, the situation of teachers in the field would not be improved. Some research has been done with respect to the problems of present teachers—research designed to set up in-service training programs in science for the elementary level. As one might expect, the primary problem of these teachers is the lack of subject-matter background. Other problems deal with the lack of equipment and lack of knowledge about ordering ready-made equipment and constructing and using home-made equipment. Hence, some workshops and other types of in-service training programs have been established in an attempt to assist elementary-school teachers with these problems. Research indicates that it would be advantageous for school systems to organize more of these less theoretical, more practical types of in-service programs.

SUMMARY

While it would serve no purpose to summarize the studies already summarized there seems to be two observations that are justified:

1. Many of the studies could be improved immeasurably in quality. One gets the impression of efforts to produce results rather than to produce *valid* results. The ordinary safeguards of research are frequently disregarded.

2. The number of status studies seems to be sufficient. A vast number of the problems of science education have been identified. However, their is a conspicuous lack of studies that deal with efforts to seek solutions. More of these studies are needed.



MATERIALS

Better-Schools Campaign Kit. Kit of advertising materials for use with business groups in promotion of better schools campaign sponsored by the Advertising Council in cooperation with the National Citizens Commission for the Public Schools and the U. S. Office of Education. Free. Order from the Advertising Council, 25 W. 45th St., New York 36, N. Y.

Clay Play by Julia Hamlin Duncan. Guidance for starting simple clay work, pottery, and ceramic sculpture. Reprint. Free.

Time To Kiln. How to choose and use a kiln. Free. Order both items from Pemco Corporation, 5601 Eastern Ave., Baltimore 24, Md.

Better Teaching with Felt Board prepared under the direction of Arthur C. Stenius. How to use felt board in the classroom. Free, American Felt Co., Glenville, Conn.

1954 Annotated List of Phonograph Records. Some 1000 selected recordings suitable for kindergarten through high school. 10c. Children's Reading Service, 1078 St. John's Place, Brooklyn 13, N. Y.

How Children Grow and Develop by William C. Olson and John Lewellen. Analysis of growth process at different stages of child development. 1953. 50c. Address, Science Research Associates, Inc., 57 W. Grand Ave., Chicago 10, Ill.

More than 25 years of research by childhood development specialists have resulted in the ***Modern Playway***

—Educational Playthings. And now, with this Handbook, nursery school and kindergarten teachers . . . . parents . . . . can easily make a sound choice, geared to the proper age level, of purposeful playthings that satisfy a child's urge to learn and grow through play, mentally as well as physically. You will find it an undispensable help when purchasing suitably designed work and play materials for planning an intelligent play program. Illustrated. Price List Included. 25c. Address, The American Crayon Co., Dept. CE-40, Sandusky, Ohio.

Audio-Visual Aids for the English Teacher. This is the title of a 20-page guide to the many films, filmstrips, records, and pictorial maps for use in English classes, reprinted from ***Audio-Visual Guide.*** The guide is 25c a copy. Address, Educational and Recreation Guides, Inc., 1630 Springfield Ave., Maplewood, N. J.

A booklet just published by the American Heart Association, ***Have Fun . . . . Get Well,*** is directed to young people and to parents whose children are ill with rheumatic fever or rheumatic heart disease. The suggestions may be helpful to parents. The purpose of the pamphlet is to help parents make the time of physical repair a period that is mentally and spiritually constructive. Address, The American Heart Association, 44 East 23d St., New York 10, N. Y.

Outstanding educators familiar with children and with TV have combined to present a positive and constructive approach to television in a bulletin called, ***Children and TV—Making the Most of It.*** Chapters include the following headings:

Television—Friend or Enemy?
Research about Children and TV
The Teacher's Role in Television
What Effect Does Advertising Have on Children?
Family Problems and Television
Everyday Problems and Everyday Solutions
Television—Making the Most of It.

How Are the 5's Faring in Your Town? is the title of a leaflet concerning the importance of good public kindergartens. The leaflet was prepared by James L. Hymes, Jr., for distribution by the National Association for Nursery Education and the Association for Childhood Education, International. It is available in single or in quantity orders from the ACEI, 1200 15th St., N.W., Washington, D. C.

Teacher's Kit on Railroad Transportation. New edition of a three-part classroom tool which includes a set of tinted photo-reproductions, a booklet with the stories behind the pictures, and a teaching manual. Association of American Railroads, Washington 6, D. C.

Teacher: So your mama and brother are both teachers.
Student: Is your Daddy a teacher too?
Pupil: Naw! He works!

A PLAN OF INDIVIDUAL GUIDANCE IN READING

In a combination elementary-junior high school, the librarian stresses an individual guidance plan. Students are told that since it is impossible to read everything in the short span of a lifetime, the intelligent thing is to exercise some selectivity. This selectivity for them is best gained through individual guidance.

After introductory talks most of the guidance program is carried on with individuals, or in small homogeneous groups. The love of reading is not, in many cases, a spontaneous affair despite numerous opinions to the contrary. Even less so is the love of good literature a taste inherent in the child. Therefore, much individual work is necessary.

To give the students a guide to the literary worth of a book, a code method of marking books is used. Classics are marked with two stars and modern books of outstanding quality are marked with one star. These stars are stamped on the pockets of the books. *Newbery Medal Award Books* are also marked with two stars. This gives the librarian an opportunity to point out that the best of today's books will doubtless be the living books of tomorrow.

By way of introduction the librarian uses story-telling as an effective medium to build a desire in students to read further in a particular field. In the fourth grade the folktale is used primarily in the story-telling; in the fifth, the legend. In the sixth the science teacher offers mythology a day a week through story-telling and through student talks to the class.

Each child keeps a record card on which he lists all the books he reads whether at home or at school. On this card the librarian often writes pertinent comments or suggestions. In a large school this card helps to keep the librarian and the student in close contact.

With nonreaders and poor readers, conferences are arranged at which time the librarian has available the record of the child's reading ability and the possible causes of his difficulty. These students, especially the older ones, appreciate the interest evinced in their lack of progress and are in a very receptive frame of mind. They welcome suggestions concerning books that, although simply written, contain interesting material. The guide *Gateways to American History* is of great value as a remedial aid. At present this title is out of print, but many libraries have a copy of it. There is no minimizing the difficulty in working with this group.

In working with average readers the aim is to create in them the desire to improve their reading tastes. By average reader is here meant the one who reads on his level or a bit above it, is not too critical in his selection of books, is affirmative in his reactions, and is very easily guided to a more profitable reading program. Passivity keynotes these readers, but this same passivity can be used as one of the stages of growth during which a great amount can be done to cultivate their reading tastes.

The process of growth in appreciation with this group is slow, but there should be definite growth. A more critical awareness in selection, reading, and interpretation is bound to develop with consistent guidance.

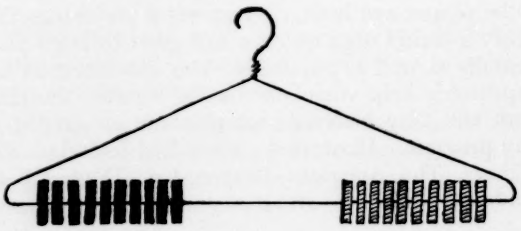
This planned guidance is aiming to develop the finest readers possible from the point of view of mental endowments. This will take some time. Even though a student is interested in his own growth, he needs much encouragement. There must be instant recognition of his effort to improve, and there should be a measure of praise. Improvement slips are given each semester to students who have noticeably improved; quality slips are given to any student who has done outstanding reading.

The teachers play a most important part in this work. They publicize worthwhile material in their fields and create great demands for specific subjects and titles. There is no more effective way to create a demand for a book than to have a teacher advertise it.

Design For Elementary Libraries
Department of Elementary Curriculum
South Bend Indiana

AN ABACUS

A coat hanger and twenty clip clothes pins makes



a good abacus for teaching the tens value of the number system and figuring out the addition or subtraction combinations. Paint ten one color and ten another color. Use it to show that 8 and 5 are the same as 10 and 3, etc. See?

WHAT'S THE NEWS?

One room broadcasts the news daily. The pupils are all reporters. Some of them (not necessarily all) get an opportunity to read the news, make the announcement, or do the commercial.

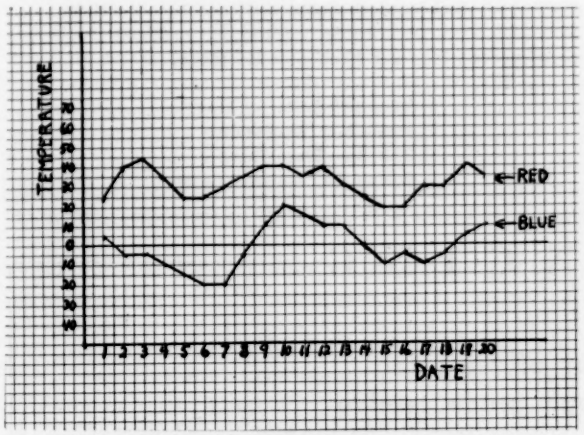
They usually begin with a news item of international interest. They include state and local news. They may conclude with a news item of interest to the building only.

They use the school's public address system. Their room always tunes in. The other rooms know about it and may ask to be tuned in or not, as they see fit.

A TEMPERATURE RECORD

Date

Each day the high and low temperature for the day was recorded on the graph. The high temperature was recorded with a red pencil and the low temperature with a blue pencil.



Children got their data from the daily paper.

They became aware of temperature as a part of weather and learned to make and read graphs.

WHAT'S MY NAME?

A sixth year class reviewed history by playing the radio game, "What's My Name." The panel of experts was the class. The quiz-masters were made up of teams. The team selected the historical character, made up a list of clues, arranged them in what they thought was order of difficulty, then used the clues on the audience until someone identified their character.

TREASURE HUNT

Arrange in alphabetical order and find the treasure:

gate basket from treasure a bush east directly feet holds real garden beside secret eight.

INDIVIDUAL SPELLING LISTS

In one room each pupil kept an individual list. Every time he missed a word in spelling and every time he misspelled a word on other written work, the word was recorded in his individual spelling list.

They kept it in loose leaf form. There were 26 sheets, one for each letter of the alphabet. That way the words were kept partially alphabetized as they went along.

Each month the long lists were re-alphabetized according to second or third letters.

POLICEMAN GAME

Some kindergarten children were playing the policeman game. This is the way they did it:

One child who was "it" said, "I have lost my little boy. He has on a brown sweater, blue overalls, and brown shoes. Who can help me find him?"

The child on whom the "it" called went and stood beside the one he guessed and said, "Is this your little boy?"

"It" responded, "Yes, that is my little boy," or "No, that is not my little boy."

The one who suggested correctly became "it" and the game continued.

The objectives were observation, sentence structure, listening, and speaking.

SPECIAL EVENTS CALENDAR

A monthly calendar was made on a piece of tag board about 30x36. The squares for the days were quite large, but the numbers were written in small figures and in the corner, leaving space to write in each square.

Special events, holidays, birthdays, etc. were recorded.

Are you a TESTER
OR a TEACHER?
I want you to find out
and tell me tomorrow.

Here is a book that will answer it. Try using the index.

This is a TESTER
testing you.

This is a TEACHER
teaching you.

PHONICS?

Overheard in a primary room: "Tell us a word beginning with "b" as you get your books."

As each child contributed a word it was added to the list, and he was handed a book from the shelf by the reading circle.

It was fun. It was profitable. It prevented a scramble over books. It eliminated any argument over who gets to pass the books.

Those who had difficulty thinking of one were given "clues."

WEEKLY NEWS REVIEW

In one room they summarize every Friday afternoon the accomplishments for the week. They list the things they have accomplished, for example:

All of us are able to complete the multiplication facts in four minutes.

We have our material on "Plantation Life" ready for reporting.

We are keeping a weather record.

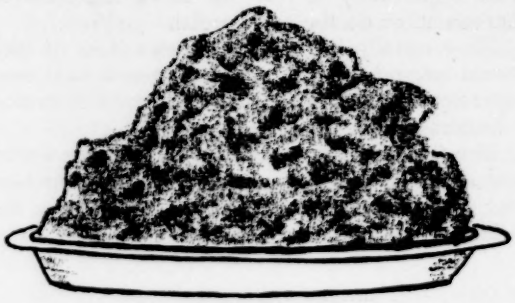
We have written business letters to get material from cities in the South.

Our butter bean seeds have begun to sprout.

These statements become the basis for a writing lesson. The summaries are kept in a booklet in diary form. They serve as a reference. They help to keep parents informed as to what is going on at school.

A SPONGE TREE

Put a large sponge in a glass pie plate. Fill the plate about half full of water. The sponge will take



up a lot of it. Now "plant" seeds of various flowers or vegetables about over the surface of the sponge in plain view. Watch them sprout. Keep a record of kinds and dates.

From "Ideas Worth Sharing"
Department of Elementary Education
Richmond, Indiana

Send your ideas for the "Try It" page.
Address:

"Try It" Editor
Journal of Education
332 Bay State Road
Boston 15, Massachusetts

A N N O U N C I N G

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An Appreciation of William Holmes McGuffey

By James R. Hobson

The volume, attractiveness, and scientific construction of reading materials designed for the use of children of all ages and abilities is one of the bright spots in present day education. The most inexperienced beginning teacher today has some acquaintance with the facts of child psychology and development together with training in techniques and experience with materials in various subject matter fields. The school child of today is so widely informed and actively stimulated by television, radio, and motion pictures that he may know more about the world and outer space than he does about his neighborhood or his town.

None of these conditions obtained in 1829 when William Holmes McGuffey published in London a treatise on Methods of Reading, nor during the next seventy-five years in which the McGuffey Readers reached and maintained a position of preeminence in the school reader field west of the Alleghenies.

In his book, *William Holmes McGuffey and His Readers,* Dean Emeritus Harvey C. Minnich of Miami University, Curator of the McGuffey Museum at Oxford, Ohio, has very ably analyzed the reasons for the supremacy of the McGuffey Readers over this span of time and territory. These reasons are: 1. The method of proceeding directly from the learning of the alphabet to reading, omitting the intermediate step of spelling which had been considered prerequisite to any reading up to that time.

2. "Drills upon the syllable as a unit in word mastery; enunciation as a first essential in a spoken language; short and simple sentences; a sequence of ideas that held the attention of the young learner; painstaking and continuous correction of faulty pronunciation."

3. "Choice and arrangement of material adapted for the child mind of the times."

4. The choice of the title, Eclectic, for the series of readers. This conveyed the idea of being "unlimited by territorial lines, particular modes of thought, or particular forms of instruction." This idea was in tune with the temper of the times.

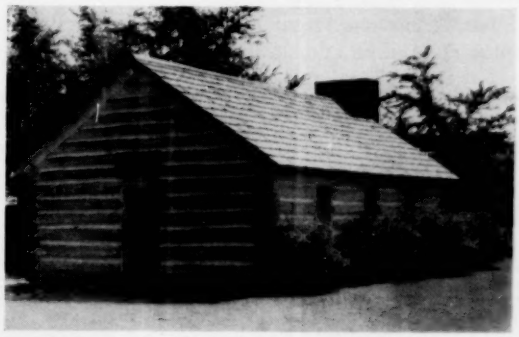
5. "The standards of social life set up in each of the readers:" "enough Puritan to fit into the religious mental mode of the descendants of the Ohio Land Company; enough Cavalier to fit into the moral and mental mode of the blue blood of Kentucky, Virginia and North Carolina; enough economic to fit into the thrifty mental mode of the Germans and Scots."

6. The wide and skillful use of pictures and illustrations, a comparative rarity up to this time.

7. The intrinsic literary merit of the selections used in the readers in a day when there was no body of children's literature worthy of the name. Many of these selections were of McGuffey's own composition.

8. The ability of the publishers and editors of the revisions of the McGuffey readers over the years.

The genius of William Holmes McGuffey is reflected in his intuitive recognition of the needs of children in his day, in his canny appraisal of the temper of the times, in his intelligent anticipation of the later demonstrated principles of child psychology, and in his pedagogical and literary craftsmanship.



Courtesy of The Henry Ford Museum, Dearborn, Michigan

The McGuffey Schoolhouse

Another demonstration of the McGuffey genius is found in the manysidedness of his career. He was successively Professor of Ancient Languages in Miami University, Professor of Mental and Moral Philosophy in the same institution, an ordained minister in the Presbyterian Church, President of Cincinnati College, President of Ohio University, Professor of Languages at Woodward College, and Professor of Moral Philosophy at the University of Virginia for twenty-eight years until his death in 1873, the first American-educated professor to occupy this important chair. In the course of this long and distinguished career he was instrumental in the establishment of a State Department of Education in Ohio and the election of a State Commissioner of Common Schools three months prior to the election of Horace Mann as Secretary of the State Board of Education for Massachusetts. He was a colleague and moving spirit among the noted educators who established the College of Teachers and Western Literary Institute in Cincinnati, forerunner of the National Education Association. Again at Charlottesville he joined with two colleagues in the establishment of a state school system in Virginia.

It has always seemed to the writer that there is a striking parallel between the positions of William H.

McGuffey as an educator and philosopher and William James as a philosopher and psychologist some decades later, in that each achieved fame and preeminence during his lifetime for his wide understanding in his chosen field and for his literary skill in expounding this global grasp. The enduring fame of each of these illustrious leaders in his field, however, seems to rest upon the insight each showed in first anticipating so many of the later important developments in that field now regarded as commonplace.

The salient contributions of Dr. McGuffey to educational theory of his day as demonstrated by the practices in his readers would include: 1. The educational and cultural value of excerpts from the classics of literature including the Bible. 2. The importance to and interest for children of nature study. 3. The necessity for both precept and example, as portrayed in his stories, in the ethical and moral training of youth. 4. The contribution visual stimulation plays in education. 5. The recognition of child nature and needs as being distinct from those of adulthood.

Never has childhood had a more understanding mentor nor public education a more farseeing friend.

Dr. James R. Hobson is Director of Child Placement in the Brookline, Mass. Public Schools. He has taught in the Cambridge and Lorain Ohio high schools, in the Harvard Graduate School of Education and the Boston University School of Education. He traveled in Europe as a Sheldon Fellow in 1931-1932.

Spring Publication

Handbook of Private Schools

35th edition, 1954, 1216 pp., red silk cloth, $8

The new edition includes more than 4500 schools!

Extensive new data concerning the scope of private education throughout the United States, Canada, and South America is given in 600,000 words.

Detailed descriptions of the 1000 leading private schools entail statistics for the 1953 graduates of each school; their choice of college and number entering each; and for a five year period. Facts and statistics comprise complete information for each school.

Hundreds of special schools,—for the physically handicapped, the retarded, those with unusual features, amplify the Supplementary Lists. New listings of pre-primary schools, junior colleges offering secondary grades, private and diocesan Catholic schools, and other sectarian schools comprise 2500 additions to previous editions.

The GUIDE TO SUMMER CAMPS, 9th ed., 112 pp., paper, $1.10; cloth, $2.20, lists data for 500 camps.

PORTER SARGENT

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Conserving Values . . .

(Continued from page 16)

Another instance of the opportunity for concreteness is in the field of parent-school relations. The rural community school, because of its personalized nature (and if it isn't personalized there's no point in trying to be a community school), can deal concretely with the parents on such problems as why Johnnie is having a hard time in arithmetic, what to do in school about Susie's excitable nature, or why Mary seems to spend so much time daydreaming. If matters of this sort are taken up concretely, in terms of Johnnie, and Susie, and Mary, we don't need to befuddle the issue with charges of enemies of the school or attacks on public education. It is my firm belief that the hysteria that is running wild in many places can be effectively subdued only through strengthening the bonds of confidence between school and community, in each community as it is, and by dealing concretely with local problems as they arise (if not before).

Anyone taking a responsible part in any kind of an educational enterprise in this country today should not need to look for opportuities to exercise humility. They confront him at every turn. As teachers, how can we guide these young lives aright? Which is more important, taking five minutes with Janet to help her learn the right way of looking up her special topic in history or five minutes with Joe to help him master the words in tomorrow's lesson? As administrators, where should we apply our leadership efforts? Should we let the relations among the school lunch workers go from bad to worse while we counsel a teacher on personal problems? Should we check over next year's budget figures with a fine-tooth comb before a board meeting, or should we leave that to the bookkeeper while we cultivate the good will of the local editor? We can't do all that cries out to be done.

The upsurge of the democratic ideal is making itself felt in countless ways. It makes everyone strive more zealously than before for the right to uniqueness, the right to self-expression, the right to a well paying job with coffee hour both morning and afternoon. It glorifies individuality more than ever before in the face of a technology which makes interdependence and the need for cooperative action more pronounced than ever before. We as educators are trying to help people use their intelligence to reconcile these two opposing trends and effect a constructive resolution that will bring mankind out on top. And we are trying to do it with too little and too late. Why should we be anything but humble?

But we need not be discouraged. For we know that back home in our rural communities we have many worthy colleagues and co-workers, with whom, in the intimacy of shared effort, we share also deep satisfactions. In this fellowship and in our awareness of the inexorable cosmic forces of nature, we know that we are in touch with the values that can unify mankind on this earth.

Under his jacket

Are you proud that he has everything he needs as he starts the adventure of each day at school? Be prouder still of something hidden under his trim jacket —the stout heart that sends him off unafraid and eager.

This, too, you have given him because your love has made his small world secure. With it, he will build his own security as each challenge comes, in those days when he must stand alone without you.

What finer gift can you give those you love than the gift of security? It is the great privilege in America, where we are free to provide it.

And think, too—this is the way each of us helps build the security of our country, by simply taking care of our own. A secure America is the sum of its secure homes.

The security of *your* country begins in *your* home.

Saving for security is easy! Read every word—now!

If you've tried to save and failed, chances are it was because you didn't have a *plan*. Well, here's a savings system that really works—the Payroll Savings Plan for investing in U.S. Savings Bonds. This is all you do. Go to your company's pay office, choose the amount you want to save—a couple of dollars a payday, or as much as you wish. That money will be set aside for you before you even draw your pay. And automatically invested in Series "E" U.S. Savings Bonds which are turned over to you.

If you can save only $3.75 a week on the Plan, in 9 years and 8 months you will have $2,137.30.

U.S. Series "E" Bonds earn interest at an average of 3% per year, compounded semiannually, when held to maturity! And they can go on earning interest for as long as 19 years and 8 months if you wish, giving you a return of 80% on your original investment!

Eight million working men and women are building their security with the Payroll Savings Plan. For your sake, and your family's, too, how about signing up today? If you are self-employed, ask your banker about the Bond-A-Month Plan.

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